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ABSTRACT

The proceedings of a seminar on integrating language instruction and academic content instruction include: two presentations surveying the current state of the art in content-based language instruction ("Language and Content Learning: Finding Common Ground," by Bernard Mohan and "Integrating Content and Language Instruction," by Helena Anderson Curtain); summaries of four sessions geared to different languages and levels of instruction (elementary or secondary grades, and English or foreign languages); an overview of critical concerns in the content-based instruction, and summary remarks by G. Richard Tucker. Descriptions of ten content-based programs represented in the presentations and a list of resources in the field are appended. (MSE)

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INTEGRATING LANGUAGE AND CONTENT INSTRUCTION

Karen F. Willetts, Editor
Center for Applied Linguistics

ER5

CLEAR

CENTER FOR LANGUAGE EDUCATION AND RESEARCH

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University of California, Los Angeles

INTEGRATING LANGUAGE AND CONTENT INSTRUCTION

Karen F. Willetts, Editor
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Center for Language Education and Research
University of California, Los Angeles

1986

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Center for Language Education and Research

The Center for Language Education and Research (CLEAR) is funded by the Office of Educational Research and Improvement (OERI) to carry out a set of research and professional development activities relevant to the education of limited English proficient students and foreign language students. Located at the University of California, Los Angeles, CLEAR also has branches at the Center for Applied Linguistics in Washington, D.C., Yale University, Harvard University, and the University of California, Santa Barbara.

CLEAR believes that working toward a language-competent society should be among our nation's highest educational priorities. Thus, CLEAR is committed to assisting both non-native and native speakers of English to develop a high degree of academic proficiency in understanding, speaking, reading, and writing in English and a second or native language. To work toward this goal, CLEAR has united researchers from education, linguistics, psychology, anthropology, and sociology with practitioners, parents, and community agencies.

A coordinated set of research, instructional improvement, community involvement, and dissemination activities are oriented around three major themes: (a) improving the English proficiency and academic content knowledge of language minority students; (b) strengthening second language capacities through improved teaching and learning of foreign languages; and (c) improving research and practice in educational programs that jointly meet the needs of language minority and majority students.

The CLEAR Educational Report Series is designed for practitioners and laypersons interested in issues in second language education and foreign language teaching and research.

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PREFACE

The members of the Center for Language Education and Research (CLEAR) project would like to thank all those who participated in the Seminar on Integrating Language and Content Instruction for sharing their valuable experiences and insights. We would like to express our appreciation to Helena Anderson Curtain and Bernard Mohan for their excellent opening presentations which provided a framework and basis for discussion and to G. Richard Tucker for his concluding remarks which clarified and outlined future directions for content-based language instruction.

The CLEAR staff at the Center for Applied Linguistics who participated in planning and organizing this seminar were: JoAnn Crandall (Coordinator), Donna Christian, Tara McCallum, Nancy Rhodes, Carmen Simich-Dudgeon, George Spanos, and Karen Willetts. A special acknowledgement is due the four group moderators who led discussions and submitted written resumes of their respective groups: Content Instruction in English: Elementary Grades--Carmen Simich-Dudgeon; Secondary Grades--George Spanos; Content Instruction in Foreign Languages: Elementary Grades--Nancy Rhodes; and Secondary Grades--Karen Willetts. The various sections of the monograph were edited by Karen Willetts with assistance from JoAnn Crandall and Margaret McFerren. Tara McCallum and Paula Sandin assisted in the typing.

In addition to the Office of Educational Research and Improvement, partial financial support for the seminar was also provided by the Fund for the Improvement of Postsecondary Education and the Ford Foundation for which CLEAR staff members are grateful.

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Arlington, VA Public Schools
Cincinnati, OH Public Schools
District of Columbia Public Schools
Fairfax, VA County Public Schools
Milwaukee, WI Public Schools
Montgomery, MD County Public Schools
Prince George's, MD County Public Schools
University of California Los Angeles, CA
University of Miami, FL
Washington International School, DC

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I. INTRODUCTION

In response to growing recognition of the importance of integrating language and content learning, the Center for Language Education and Research (CLEAR) brought together researchers, teachers, administrators, and materials developers from ESL, foreign languages, and bilingual education for a seminar on January 6, 1986 at the Center for Applied Linguistics in Washington, D.C. Discussion included the ways in which language and content instruction can be effectively combined, the kinds of programs and materials that exist, and the needs or problems that must be addressed, by CLEAR and others, to facilitate this integration.

This monograph is a synthesis of the proceedings of this Seminar on Integrating Language and Content Instruction whose goals were to:

1. identify ways in which language instruction and academic content instruction can be successfully combined;

2. identify model programs, promising teaching methodologies, materials, and other resources;

3. provide direction for future program development by identifying needs in teacher training, materials, curriculum, and research;

4. summarize and disseminate information about the current status and needs in content-based language instruction; and

5. provide guidance for future CLEAR activities.

The morning session of the seminar was devoted to surveying the current state of the art in content-based language instruction. This sharing of information was given focus by the two opening addresses: one by Bernard Mohan (University of British Columbia) on the integration of content in ESL instruction and another by Helena Anderson Curtain (Milwaukee Public Schools) on the integration of content in foreign language immersion instruction. Their papers comprise Sections 2 and 3, respectively, of the monograph.

Small groups then met according to the language and level of content instruction in which the participants were principally involved: i) elementary ESL; ii) secondary ESL; iii) elementary FL; and iv) secondary FL. Sections 4 - 7 of the monograph report on the discussions held in these four groups which focused on the following points:

--- What kinds of programs exist?

--- What materials and resources are available?

--- How are teachers being prepared for these programs?

--- What teaching methods/techniques/strategies are being used?

--- What placement and assessment procedures are being used?

To reflect the commonality of interests and needs found in both ESL and FL content-based instruction, the afternoon groups were reconfigured so that each included elementary or secondary ESL, FL, and bilingual teachers, administrators, and researchers whose exchange of information revealed possibilities for two-way or interlocking programs. In the plenary session which followed, the group moderators summarized their findings and participants joined in an open discussion of the most critical issues and needs in integrating language and content instruction. Section 8 presents the following critical concerns identified by the seminar participants:

--- materials and curriculum;

--- dissemination and evaluation;

--- methodology and programs;

--- teacher training and certification;

--- placement and assessment; and

--- research.

The conclusion of the monograph, Section 9, consists of the closing summary remarks by CAL President G. Richard Tucker who provides recommendations for future development of programs, materials, and research, and indicates possible directions for CLEAR activities in the area of integrating language and content instruction. This section includes a list of the references cited in the text of the monograph.

Samples of representative content-based programs presented in the various groups at the seminar are in Appendix A. The descriptions include ESL, FL, and teacher training programs. Appendix B consists of selected resources in content-based instruction. The list is not meant to be exhaustive and primarily includes those materials brought to our attention by the participants at the seminar. The list will be expanded as CLEAR continues to collect information.

2. LANGUAGE AND CONTENT LEARNING: FINDING COMMON GROUND

Bernard A. Mohan, University of British Columbia

A majority of second language learners do not learn language for its own sake. They learn because they must learn subject matter through the medium of the second language. They must use the second language to learn. Accordingly, the integration of language learning and content learning is now considered an important question in the field of language research. Many scholars now believe that a second language is learned not so much by direct instruction in the rules of language, but by using the language in meaningful contexts. The success of Canadian French immersion programs is widely known (Swain & Lapkin, 1981). Krashen (1982) argues that learners will acquire a second language only if they receive comprehensible input in it. Talk becomes comprehensible to second language learners through context and reference to background knowledge and experience. But talk is not enough. Cummins (1984) provides evidence that to succeed in school, bilingual students need more than conversational fluency; they need to develop the cognitive and academic skills required for learning academic subject matter. Thus instead of teaching language in isolation from subject matter, teachers should aim to integrate language development with content learning; they should make good use of learners' experience; and they should focus on higher-level cognitive skills. Instead of seeing language merely as a means of communication, teachers need to see language as a medium of learning.

A theory, research basis, and general model for work toward integrating language teaching and content teaching for ESL students have been under development for the past several years (Mohan, 1986). Early, Thew, and Wakefield (1986) provide a wide range of sample lessons and annotated resources. Additional examples of teachers working independently with this approach will be described here. While there is nothing wrong with large-scale curriculum development, changes in school programs are more likely to succeed if they build on what individual teachers find feasible and useful rather than if practices are imposed on teachers from above, especially if teachers consider them impractical or unnecessary (Sarason, 1982). In general, change is more likely to occur when common ground is found among language teachers and content teachers; that is, when the focus is on issues of common concern to all teachers of limited-English-proficient (LEP) students. The three most important areas of common ground are topics, the learner's experience, and cognitive skills.

Topics

All teachers communicate with learners about topics. When teachers and learners communicate, they communicate about something. To the content teacher, topics are "subject matter"; to the language teacher, topics are often thought of as "themes." Both aim to get the learner to understand a topic, but they then use the topic material for different purposes. Thus language teachers already know how to select and use content-based material, although they may not always recognize this fact. But language teachers do not have to be content experts; that is the role of the content teacher.

Sinclair (n.d.) noticed that television was popular with her high school ESL class. They particularly watched situation comedies such as "Three's Company." So she decided to videotape television programs and discuss them in class. However, rather than use a situation comedy, she chose an attractively presented science program, "3-2-1 Contact." Knowing that many students spend more hours watching television than attending school, she aimed to make their television viewing habits more academically rewarding. In particular, she aimed to increase their background knowledge of science and to develop their ability to talk about scientific matter. Yet she did not aim to "teach science," but rather to help students get more benefit from their science classes. She reported that her students found the material interesting and useful to discuss, and that the approach was well within her skills as an ESL teacher. This experience has implications for materials development. Little videotaped language teaching material is available, but there is a vast amount of television material which can be used for content-based language learning. The same situation holds for written sources of information, both in the school and in the community. Resource guides which classify materials suitable for different types of language learners are needed. For one example, see the relevant section of Early, Thew & Wakefield (1986).

The Learner's Experience

Most teachers plan for students to learn not only through textbooks and teacher talk but also through experiences. Science classes have laboratory work in addition to lectures; business education students have textbooks, but they also participate in business simulations. Likewise, language teachers seldom rely on language alone: they draw on all kinds of demonstrations, realia, films, and hands-on activities.

Rose Audia (Hermanson, 1986) teaches an intermediate ESL class in an elementary school. Her students range in age from nine to 13 and vary in educational background and fluency in English. She and her students were working on the topic of insects. Some butterfly cocoons kept in a cage in the classroom had just hatched when a visitor arrived. The children escorted the visitor to the cage and eagerly described what had happened. Later everyone watched a film on the life-cycle of the butterfly.

In the discussion following, the teacher took them through a review of the various stages, using questions and drawing and labeling the cycle on the board. The students were told that they would each be drawing a picture of the life-cycle of the butterfly and that the pictures would go into the booklets they were making. The children then got to work, asking the teacher about the size of the circle, placement of title and labeling, and consulting each other. They made frequent trips to the cage to scrutinize the color and pattern of the wings.

Traditional language teaching methods tend to be very verbal. A typical lesson takes a dialogue or reading passage, drills it and kills it. Even at the end of this exchange of words the students may not fully understand the passage they have read or the sentences they have repeated. By treating language as an object rather than a means of communicating about the world, this approach undermines its own aims. Recent initiatives in language teaching

which promote student talk are a positive step, but retain a verbal bias if they do not give serious consideration to what students might talk about.

With the "insects" topic, the teacher used an experiential approach. The students had interesting things to see, understand, and talk about. When they spoke they could point to what was happening in the cage; when they wrote they could support their ideas with drawings. The teacher did not have to create all of the experiential resources she worked with: she used material that is available to any science teacher. Besides the cocoons and the film, she introduced photographs of insects, boxes of live specimens, display collections, and charts of beetles. Students systematically observed insects with magnifying glasses, collected some of their own specimens, and made model insects with paper and pipe cleaners. Yet these experiences were not a random collection of "visual aids"; they were progressively organized, reflecting the organization of the scientific material they were drawn from. Finally, the experiential approach encouraged the students to inquire further, asking their own questions. The teacher answered these questions, not as a science expert, but as someone who can help students find out for themselves.

Cognitive Skills and Cognitive Structure

Most teachers want their students to go beyond rote memorization and engage in higher-level thinking skills. Content teachers often do this through appropriate questioning techniques and problem-posing inquiry materials. Language teachers often work with higher-level thinking via discourse patterns in academic reading and writing.

In both cases, graphical techniques that convey the structure of information are frequently helpful. This was the reason the students studying insects were drawing life-cycle diagrams. It was not merely to aid communication, but also to help them see the life-cycle structure as a general idea which could eventually be applied to all living things. It was a knowledge structure or situational frame that helped them interpret their observations and experiences. The teacher is well aware of this, but she conveys it to the students not by words, but tacitly, through a graphic.

Meryl Arnott (Arnott, 1985), a high school ESL teacher who was previously a teacher of social studies, now teaches a transitional ESL course in social studies aiming both to develop academic language proficiency and to provide students with access to social studies knowledge and inquiry objectives. Typical of her students is L., a 17-year-old girl who had an interrupted education in Vietnam and who registered in the course after one year in a junior high ESL program.

The class was using a grade 4 social studies unit called "How should Albertans use their natural resources?," part of which was an article, "Soils in Alberta." All of the material was beyond the reading level of the class; they could not understand it. Arnott had to find ways to mediate between these students and the content material. She did this by concentrating on the structure of the information rather than the text.

The pattern of organization in the "Soils in Alberta" article was that of comparison and contrast. She designed a chart to highlight the key features of the different soil types: location, precipitation, fertility, and use. The students had to fill in the details of the chart. Although the students found the article difficult to read, they were able to locate the information for the chart by scanning for the key words in the text. They then did a series of exercises based on the chart, not on the text. First they drew the soil areas on a map, using an atlas to locate the places named in the chart. They worked on vocabulary exercises which explored different forms of words found in the chart, such as fertile/fertility/fertilizer. They were asked questions which could be answered from the chart, such as "Why does the black soil area produce the most wheat?" These reinforced comprehension and forced the students to compose their own sentences rather than copy sentences from the text. Finally the students were helped to express the chart information in written paragraphs.

This teacher's approach to lowering the language barrier, developing academic language, and promoting social inquiry skills depends on graphics--charts, timelines, action strips, and tree diagrams. The graphics are designed to highlight social studies concepts. They help students to see the patterns of organization in social studies material and to structure their own inquires. She does not find graphics difficult to create or unusually time-consuming. Well-written content material reveals its pattern of organization easily. Badly written material needs mediation by the teacher anyway, and a graphic is often the easiest way to do this. Time spent on graphics is repaid by the quality of her students' writing, which she finds rich in content and coherently expressed, though of course not without structural errors.

Integration

These three teachers do not see topics, experience, and frames merely as ways to promote communication and aid second language acquisition. To do so would be to fail to see beyond a language-learning perspective and to ignore the content teacher's perspective, to fail to integrate language learning with content learning. They see a topic not as a body of verbal information to be transmitted and memorized, but as a way of looking at the world, which combines experiences with frames for understanding experiences. The students studying insects were not simply talking about butterflies or learning facts about butterflies. They were systematically observing butterflies and organizing and recording their experiences according to the concept of the life-cycle. At a beginning level they were learning to act and think like biologists. They were learning ways of acting and understanding as well as ways of talking. They were being socialized into the practices of a scientific community of inquirers. Education is the initiation of learners into social practices, or social contexts of action and understanding (Peters, 1966).

These three language teachers did not organize their lessons around language teaching points or even communicative activities. They began from the common ground of all teaching. They gave learners the contextual resources for understanding language and information. They started from a whole context of action and understanding and worked with language within this context. Context links the three areas of common ground. A context of action and understanding

is a unified field of meaning which integrates at least three things: the factual information associated with a topic, the actions and observations which are part of experiential learning and the knowledge structures or frames which organize facts and experiences.

This does not mean that they deal with language randomly, and that there was no systematic planning for language learning. On the contrary, they guide their students to describe, classify, and evaluate insects, or to describe, classify, and evaluate soils--to mention just some possibilities--and they capitalize on the specific language-learning opportunities provided. These teachers are all familiar with a general framework that relates language use to subject matter learning. This is described in detail by Mohan (1986).

Although this general framework for integrating language learning and content learning breaks new ground, even beginning language teachers can readily understand it and use it. It has been used in a basic ESL teaching course for several years. Students are asked to plan a unit around a topic, providing for experiential work, higher-level thinking and systematic language learning. The framework is introduced, along with various examples, to help them see how to do this.

The students are shown how to analyze a topic into action situations and background knowledge. They are told that action situations include description, sequence and choice and that background knowledge includes classification, principles and evaluation. Descriptive discourse is examined and the typical language items that occur are noted. The same is done for sequence and all the other categories. As the students develop their units, their ideas and difficulties are discussed in class.

One student teacher, Andrea Law, designed a unit on "The Library." The action situation was the process of visiting the library and selecting a book, which lent itself to experiential work. The task included describing the layout of the library, noting the procedure followed by a library user and discussing the choice of books. Thus learners could be helped to develop the language of description, sequence and choice. Background knowledge about library organization and regulations offered material for work with classification, principles (e.g., rules and regulations) and evaluation. This included discussing the classification of books in the library, aided by a tree diagram, which obviously calls for the language of classification. In all of this, Law presented the topic of the library, not as a list of facts to be transmitted, but as a social context, a world of action and meaning into which her students could enter. She analyzed this context according to a general pattern which applied to other contexts, and she identified language learning possibilities which could be transferred to other topics.

Planning this type of unit was a challenging task for these beginning teachers, but not an impossible one. A number of students remarked that they now felt better prepared as language teachers. They found it easier and more natural to organize learning around topics than around language points or specific skills. Yet at the same time, the topic material provided a context in which detailed language work became more meaningful. Having worked on one

topic in depth and having discussed each other's topics, they could see how this approach could be applied generally.

Research Perspectives

Recent research concerning the integration of language learning and content learning contains two very different perspectives which lead in quite different directions. From the perspective of second language acquisition theory, the aim of integration is simply to help students learn a second language. The goal of helping students learn content is of no theoretical interest. Nor is the question of finding common ground between language teaching and content teaching an issue for theory and research. Because it does not attempt to integrate language and content learning in theory, this perspective may fail to support integration programs in practice. Unrecognized common ground becomes disputed territory or no-man's-land. Content teachers may feel that their viewpoint is being ignored and may regard integration as a takeover bid by the language department. Language teachers, misunderstanding the concept of integration, may reject content-based teaching because it is "not their job."

The perspective of scholars like Halliday (1985) and Mohan (1986) is quite different. First language development should continue through the school years and respond to the demands of language use in school. Thus LEP students must develop more than conversational proficiency in the second language; they must develop the academic language proficiency required of all students in any language. The interest is not only in the learning of language but in the language of learning. Language is not just a medium of communication but a medium of learning across the curriculum. The goal of integration is both language learning and content learning. Content-based classrooms are not merely places where a student learns a second language; they are places where a student gains an education. A linguistic and contextual approach to learning requires finding common ground between language teaching and content teaching. This is a central question for theory and research.

The second perspective sets a different research agenda. Beyond studies of teacher talk as language input, studies of experiential learning--how students and teachers use context to increase access to knowledge--are needed. Beyond textual studies of reading and writing, studies of the cognitive structure of content material and how this can be expressed in different modes so that students can gain access to it across language barriers are essential. Finally, beyond studies of language learning by school learners, studies of education as a communicative accomplishment situated in the context of subject matter knowledge, knowledge which provides cognitive frames for the interpretation of experience, are required. It is here that a framework for analyzing language learning and content learning plays a most important role.

3. INTEGRATING CONTENT AND LANGUAGE INSTRUCTION

Helena Anderson Curtain, Milwaukee Public Schools

The goals of second language teachers and classroom teachers have not always been congruent. Too often the second language curriculum has been independent and exclusive of the content area curriculum. The integration of language and content instruction is a positive step in meeting the goals of both language and content teachers. Indeed, integration of language and subject content has successfully been accomplished in immersion programs and has emerged as a feature of sheltered-English programs for Limited-English-Proficient (LEP) students. In both programs students succeed not only in acquiring a second language, but also succeed in acquiring subject content knowledge at the same time.

Immersion programs have very successfully demonstrated for a period of over 20 years that students can learn subject content and language simultaneously and achieve in standardized tests administered in English at the same level or often at higher levels than students in English-only classes (Swain, 1984). In immersion programs, the second language is used as the medium for subject content instruction and students learn the second language naturally, because they need it to communicate about school subjects and what is happening around them. In total immersion programs, the first two or three years in the program are conducted entirely through the second language, and students begin initial reading instruction in that language.

The goals of immersion programs are usually four-fold (Genessee, 1984):

1. to provide the participating students with functional competence in both written and spoken aspects of the second language;

2. to promote and maintain normal levels of first language development;

3. to ensure achievement in academic subjects commensurate with students' academic ability and grade level; and

4. to instill in the student an understanding and appreciation for the target language group and their language and culture without detracting in any way from the students' identity with and appreciation of the home language and culture.

Immersion programs are not alone in providing successful content-based instruction for second language learners. Sheltered-English programs, which originated in California, have also proven to be very effective in this regard. Sheltered-English programs are components of bilingual education programs, which are designed to teach English and subject content to LEP students using specially adapted (but not watered-down) curriculums and materials. In the sheltered-English class, as in the immersion class, language is only a tool through which subject content is learned.

The goals of sheltered-English programs for language-minority students as articulated by Holt and Tempes (1982) are: that LEP students will (a) attain

high levels of oral English proficiency; (b) achieve in academic areas; and (c) experience positive psychosocial adjustment to life in a complex, multicultural society.

A third example of successful content-based instruction can be found in "enriched FLES" (foreign language in the elementary school) programs or partial immersion programs in which students receive some subject content instruction in a second language in addition to formal language instruction.

Examples of such programs can be found in Cincinnati, OH, where elementary students are learning Arabic, Chinese, Japanese, or Russian through art, music, and physical education classes, and in Milwaukee, WI, where a group of middle school students are learning Spanish and mathematics taught through Spanish. Elementary students in the Maple Dale-Indian Hill School District just outside of Milwaukee, participate in an interdisciplinary Spanish program. Language arts and selected science, art, and social studies lessons are taught in Spanish.

Recent second language acquisition research gives theoretical support to the success that content-based second language learning programs have shown. The distinction that has been made between "acquisition" and "learning" (Krashen, 1981; Stevick, 1980) shows that acquisition occurs when language is "picked up" naturally--a subconscious process almost like learning a first language. Research further suggests that acquiring a second language is dependent on sufficient understandable linguistic input that the brain processes in order to generate speech. Krashen (1981) uses the term "comprehensible input" to describe this process.

Some characteristics of comprehensible input are:

1. It must contain some language already known to the students and some language not yet acquired.

2. The language that is acquired is acquired through context, gestures, and linguistic modifications.

3. The message must focus on meaning and not on form, and must be interesting to the student.

4. The input is not necessarily grammatically sequenced.

5. Affective factors that are present are self-confidence and low anxiety.

Additional second language acquisition research that supports content-based instruction is that of Cummins (1981) who states that first or second language proficiency can be looked at in terms of the degree of contextual support available for expressing or comprehending through a language and the degree of cognitive involvement necessary to do an activity. Asher (1977) talks about the role of a "silent period" in second language instruction when students are not required to produce utterances before they are ready. Dulay and Burt (1978), among others, point to the importance of the separation of primary and target languages in second language programs.

It is interesting to note that all of the aspects of second language acquisition research that have been mentioned here are present in immersion and sheltered-English programs:

1. There is a focus on meaning rather than on form. There is no overt error correction.

2. Linguistic modifications such as simplified speech and controlled vocabulary that are necessary for comprehensible input are used.

3. Instructional language has contextual clues to help convey meaning.

4. Conversational interaction--usually the subject content--is interesting and real to the students.

5. Languages of instruction are kept very carefully separated.

6. Students are allowed a silent period and do not have to speak until they are ready.

Though immersion programs and sheltered-English programs have many factors in common, they differ in the populations that they serve. LEP students in sheltered-English programs, in addition to acquiring the second language, must also deal with the need for adjustment to a new and unfamiliar world. Immersion programs serve majority-language speakers where this adjustment is not a concern.

The successes of content-based instruction as evidenced in immersion programs and sheltered-English programs need to be carried further into other more traditional foreign language programs, at the elementary, middle school/ junior high, and high school levels. Especially in the area of elementary foreign language programs, the incorporation of content-based instruction would give increased impetus to language study at that level, not only because of the increased language learning success it would bring, but also because it would provide a solution for the perennial problem of what to take out of the curriculum in order to find time for elementary foreign language instruction. If content-based instruction were incorporated into elementary foreign language programs, the classroom teacher who must struggle to schedule a multitude of curricular areas into a limited amount of time would see the elementary foreign language teacher as an ally in this effort, rather than someone who is taking away another valuable block of time.

Serious consideration should be given to incorporating the successful elements of sheltered-English and immersion programs into other types of language programs. With everything that is already known about the success of content-based instruction and the theoretical basis underlying it, and considering the ever greater need for second language instruction in an increasingly interdependent world, we cannot afford to do otherwise.

4. ELEMENTARY GRADES - CONTENT INSTRUCTION IN ENGLISH

WHAT KINDS OF PROGRAMS EXIST?

Content instruction in English for Limited-English-Proficient (LEP) students is being provided in programs as diverse as two-way maintenance bilingual programs, two-way transitional bilingual programs, High Intensity Language Training (HILT) programs, and English as a Second Language (ESL) pull-out programs. The two-way bilingual programs are usually found only in elementary schools, while the HILT and ESL pull-out are found at the intermediate and secondary levels.

In ESL programs, the length of time spent in ESL classes mainly depends on the degree of English proficiency of the students. Those who have only one or two hours of ESL instruction per day focus on language skills rather than content. Students enrolled in half-day or full-day HILT programs have more opportunity for English content-based instruction.

Content instruction in bilingual (e.g. Spanish-English) programs is usually offered in both languages. However, the bilingual programs seem to target the early elementary grades (K-2/K-3) for emphasis on Spanish and English language arts, while the upper elementary grades (3-6/4-6) teach content in both languages.

In both two-way bilingual and ESL programs, content instruction in English is largely limited to science, social studies, and math. The discussants agreed that more content instruction in English is needed to help LEP students make a successful transition to regular classroom instruction. Examples of the various types of programs are given below. (For additional information on these programs, see Appendix A).

Two-Way Maintenance Bilingual Program

The Oyster Elementary School (District of Columbia), grades K-6, offers a two-way bilingual education program to teach both Spanish and English to all native and non-native English-speaking students. The majority of the school population speaks Spanish as its native language. The program at Oyster has two phases: from kindergarten through the third grade, students are taught completely in Spanish. Starting with the fourth grade, they are exposed to English as a second language (for native Spanish speakers) or intensive Spanish as a second language (for native English speakers). Content matter is learned in either of the two languages on a rotating basis. For example, if science is taught for a period of time in Spanish, it is then taught in English. The goal is maintenance of both languages.

Two-Way Transitional Bilingual Program

Hartford (Connecticut) Public Schools provide bilingual education for their limited-English-proficient students. They receive content instruction in the native language (Spanish) with ESL pull-out instruction for students at different levels of English proficiency. Students who exit from the ESL

pull-out program receive content instruction in both languages from a bilingual teacher. At the lower elementary grades (K-2), the bilingual teacher and a bilingual aide provide instruction with an emphasis on developing native language skills. At the upper elementary grades (3-6), some team-teaching takes place, and the emphasis is on content instruction.

High Intensity Language Training

Arlington (Virginia) Public Schools offer HILT training at all elementary and secondary levels. They started content-based instruction for LEP students nine years ago as part of their HILT English program. At the elementary level, LEP students are bussed to selected schools where they receive language arts instruction in the morning and social studies, math and science in English during the afternoon. At the high school level, the students have content-based ESL instruction in biology, U.S. and Virginia History and vocational education.

English as a Second Language: Pull-Out Program

ESL pull-out programs have traditionally focused on several hours of English language instruction per day, depending on the proficiency level of the student. These programs are now beginning to offer more ESL content instruction as well. In school districts such as Fairfax County, VA and Prince George's County, MD, content courses are offered for LEP students at both the elementary and secondary grades in the ESL pull-out program. Local curricula are adapted for use in subjects such as math, science and social studies. Content teachers as well as ESL teachers are involved.

WHAT MATERIALS AND RESOURCES ARE AVAILABLE?

Seminar participants expressed concern about the lack of well-developed content-based curricula and materials in English for LEP students. Because of a general lack of content-based texts which meet the needs of individual school districts, texts adopted by the local districts for regular classroom use are "adapted" by teachers of LEP students, in either two-way or ESL programs. However, it is difficult to adapt these materials to the various levels of English proficiency and to the numerous cultural backgrounds of the students. In this case, teacher-made worksheets and other supplementary materials are very useful. ESL activity workbooks to accompany classroom textbooks are just beginning to be published.

Graphic aids giving overviews of a lesson or a chapter of content were said to be helpful because students are usually cognitively ready for content instruction, but they are not always linguistically ready to interpret from the text or from the teachers' discourse. (See Mohan, 1986).

Content instructional materials are more readily available in Spanish than in other languages. The majority of content-based texts are for teaching math and science to elementary and secondary LEP students. More quality texts in appropriate levels of English and in other languages are needed for the various content areas.

Some local school districts are taking the initiative and developing their own content-based texts following the guidelines and goals of their mandated curriculum, because published content-based materials do not meet the needs of the diverse LEP population in the public schools. It is difficult to use standardized texts with LEP students at different levels of conceptual and English language proficiency. (Moreover, published materials usually do not include all the concepts or skills required by the local school curriculum, or they use a different sequencing of concepts than that advocated by local school districts). Various materials that are being used or developed were brought to the attention of the participants. (See resources in Appendix B for additional information).

HOW ARE TEACHERS BEING PREPARED FOR THESE PROGRAMS?

Teacher Training

The majority of bilingual/ESL teacher training is done at the university level where pre- or in-service courses are provided in theory and practice. Often, Summer Institutes in ESL/Bilingual Education for elementary/secondary teachers are provided for graduate credit. Also universities present workshops and in-service programs for school districts. Some school districts have their own programs of in-service training consisting of workshops which focus on ESL methodologies and teaching strategies for LEP students given by ESL/bilingual specialists.

Florida International University provides teacher training for science teachers to encourage greater use of manipulatives and experiments in classroom activities. Another of their programs brought ESL and bilingual education teachers together from the same schools to produce a one-year curriculum. (Contact person for additional information: Dr. Luis Martínez-Pérez, Florida International University, Tamiami Trail, Miami, FL 33199). (See additional university teacher training programs listed in Appendix A).

In general, however, bilingual/ESL teacher training programs are weak in the area of content instruction. As much as regular classroom teachers need to have understanding about linguistics and sociocultural issues, ESL teachers need to have knowledge about content instruction. Among the few teacher education programs emphasizing relationships between language and content area instruction is that at the University of Texas at San Antonio where research on the role of science, math, and social studies in second language development is an integral part of courses in both theory and practice. (Contact person for additional information is Dr. Carolyn Kessler, Division of Bicultural-Bilingual Studies, University of San Antonio at San Antonio, San Antonio, TX 78285).

Teacher Requirements

Certification requirements vary from state to state. Many states now require ESL/bilingual certification or endorsement at the elementary or secondary level with a minimum number of university credit hours. (For example, Texas requires 12 credits at either the undergraduate or graduate level). Participants suggested that ESL/bilingual teachers should have a combined

elementary/ secondary education background to enable them to be more flexible and to team-teach with regular classroom teachers in both language and content at elementary or secondary levels. (States such as California, Minnesota, and Kansas now offer the K-12 certification).

Since many regular classroom teachers are not prepared sufficiently to deal with LEP students or curriculum adaptation, teacher preparation should consider this training, in addition to proficiency in the students' native language for bilingual programs. Teacher aides may also need specialized training.

WHAT TEACHING METHODS/TECHNIQUES/STRATEGIES ARE BEING USED?

The ESL approach is evolving from a "grammar approach" to a more content-based approach where ESL teachers attempt to reinforce regular classroom content instruction. The more recent approaches were described as communicative and functional. Other teachers said "eclectic" methods of instruction are used. Teaching strategies such as small group work and peer-teaching are also encouraged.

Many schools use the team teaching concept for implementing bilingual instruction. When possible, there are two teachers in the room, one a native speaker of English and the other a native speaker of the second language. In some cases, one bilingual teacher is assisted by an aide. When certified team teachers are not available, some school districts may use volunteers, such as retired teachers, to assist in one-to-one tutoring of LEP students. A "foster grandparent" program was mentioned as being successful. The use of older professionals and volunteers should be pursued as an additional source of help for LEP students.

WHAT PLACEMENT AND ASSESSMENT PROCEDURES ARE BEING USED?

Both formal and informal measures are used. Among the formal are:

--- the Language Assessment Scales (LAS), an oral test which gives an indication of academic language ability by measuring the relative proficiency of both Spanish and English (state-mandated in certain places such as Hartford, Connecticut); and

--- the Metropolitan Readiness Test (MRT), a test used at the beginning and end of kindergarten which indicates if students are language delayed; (May be used to counsel parents about placing their children in a dual language program such as Oyster School Washington, DC).

Among the informal procedures are:

--- teacher assessment of language skills;

--- teacher-made tests in various content areas; and

--- school records of student's past achievement and background.

The participants expressed a need for a test of English language proficiency in both spoken and written forms. They felt that tests used nationwide, such as the Bilingual Syntax Measure and the Basic Inventory of Natural Language (BINL), are not sufficient.

The lack of appropriate testing measures has resulted in the following problems for ESL programs:

--- inappropriate assessment of LEP students for entry or exit purposes;

--- inadequate assessment of the results of different ESL methodologies; and

--- lack of good quantitative data regarding the impact of bilingual education on LEP achievement.

Better placement and assessment instruments are needed to study the comparative impact of various methodologies and types of programs for LEP and bilingual students.

5. SECONDARY GRADES - CONTENT INSTRUCTION IN ENGLISH

WHAT KINDS OF PROGRAMS EXIST?

Content instruction for secondary LEP students is available in some ESL pull-out programs and in High Intensity Language Training (HILT) programs. The San Antonio Public School District provides academic ESL training in science and math for pull-out students, while the Arlington County Public Schools include biology, U.S. and Virginia History for HILT students. The Trinity-Arlington Project has a Vocationally-Oriented Bilingual Curriculum (VOBC) for high school students of Khmer, Lao, Spanish, and Vietnamese backgrounds. (See sample programs in Appendix A).

The Transitional Bilingual Education Program of the Charlotte-Mecklenburg School District (North Carolina) has an extensive listing of ESL content courses available for "beginner, intermediate, and high" levels of proficiency. Included are: math, science by investigation, chemistry, U.S. and world history, occupational preparation, skills for employability, applied economics and health. LEP secondary students who go through the enrolling process at the International Center attend special classes located at two local schools. The program is designed to assist students in gaining command of English as soon as possible while teaching them content, so that they can be quickly integrated into the all English-speaking classroom.

However, participants suggested that the number of ESL programs nationwide providing content-based instruction in English for LEP secondary students is quite limited. Because the major emphasis of most ESL programs is language learning without academic content, many LEP students are insufficiently prepared for the mainstream classes. Thus, more stress must be placed on integrating content instruction.

WHAT MATERIALS AND RESOURCES ARE AVAILABLE?

Commercially published texts available for LEP students are mainly limited to language arts, so content-based materials for LEP students are scarce. Some textbook companies are beginning to provide ESL workbooks to accompany the regular classroom text. Nevertheless, because of state-mandated curricula and high school course requirements, many school districts must adapt their local curricula and texts for LEP students. Specific secondary level subjects such as state history prohibit the sharing of already-developed curricula between the various states. Even curricula for more general subjects such as science and math are difficult to share because they are often based on locally-adopted texts. Therefore, local school districts are usually forced to develop or adapt their own materials for LEP students. (See Appendix B).

Researchers at various universities and centers are involved in materials development for LEP or bilingual students, especially in science and math. For example, the Center for Applied Linguistics, as part of a FIPSE (Fund for the Improvement of Postsecondary Education) project, is developing mathematics materials for LEP students to supplement secondary algebra texts. (Contact

person: JoAnn Crandall, Center for Applied Linguistics, 1118 22nd St. N.W., Washington, DC 20037). A project of the Cognitive Processes Research Group at the University of Massachusetts incorporates recent cognitive research findings into the design of computer software focusing on identifying and treating mathematical misconceptions. This software will have a bilingual English/Spanish option. They are also developing an authoring language called Storyboarding Language for Instructional Courseware (SLIC). (Contact person: José Mestre, Physics Department, University of Massachusetts, Amherst, MA 01003). Teachers need to be aware of the possibilities of computer-assisted-instruction (CAI), since content-based software and bilingual software can provide both academic and language development.

HOW ARE TEACHERS BEING PREPARED FOR THESE PROGRAMS?

Secondary teachers have the same options for ESL/bilingual training as do elementary teachers, such as university courses and local workshops. However, teachers of various subjects at the secondary level are less likely to get ESL training than are elementary teachers. Very often the job is left to the ESL teacher of a pull-out class, since the integration of content and language instruction is not yet widespread in regular classrooms. Summer institutes need to involve more secondary teachers.

WHAT TEACHING METHODS/TECHNIQUES/STRATEGIES ARE BEING USED?

Secondary teachers are beginning to see the need for group work and peer-tutoring, especially for multi-level students. Traditionally these techniques were largely limited to the elementary classroom, but secondary schools are starting to realize the importance of such strategies. More investigation must be done to determine which teaching methods are being used in content-based instruction in classrooms with language minority students.

WHAT PLACEMENT AND ASSESSMENT PROCEDURES ARE BEING USED?

To be qualified to participate in ESL classes, LEP students are usually given standardized tests to determine their English language proficiency. Informal assessment is also made by teachers based on the student's previous records (if available) or on the results of locally-developed tests. Little or no assessment is made of the student's ability in content areas or in the native language, since testing is mainly limited to English language proficiency. Future efforts in the development of assessment instruments should focus on content-based tests in English and in other languages for bilingual or dual programs.

6. ELEMENTARY GRADES - CONTENT INSTRUCTION IN FOREIGN LANGUAGES

WHAT KINDS OF PROGRAMS EXIST?

There are four types of programs in U.S. elementary schools that provide content instruction in languages other than English. They are total immersion, partial immersion, content-enriched foreign language in the elementary school (FLES), and two-way bilingual (interlocking) programs. Although methodologies and length of time spent in content classes may vary from program to program, they all have one common characteristic. In each program, at least one content class is taught in a second language. The languages currently being used for content instruction in the elementary grades include Spanish, French, German, and Chinese. The different types of programs can be defined as follows:

Total Immersion

Total immersion simply means a program in which the usual curriculum activities are conducted in a second language. The second language is the medium of instruction rather than the object of instruction. The second language is used for the entire school day during the first two or three years of the program. When children have acquired comprehension and can easily generate needed speech in the second language, English is introduced as a language arts subject for thirty minutes to an hour each day in the second or third grade. As students progress through the middle grades, the amount of English is gradually increased until in grades five or six there is a balance of both the second language and English. The end result is that upon leaving a total immersion program, students have not only completed the regular elementary curriculum, but are functionally proficient in the second language. (See Appendix A for descriptions of three sample immersion programs).

Partial Immersion

In partial immersion programs, a variation of total immersion, instruction takes place in the second language for part (usually at least half) of the school day. The amount of instruction in the second language usually remains constant throughout the elementary school program. Other aspects of partial immersion are similar to total immersion.

Content-Enriched FLES

Content-enriched FLES consists of the regular FLES class with an added twist. As well as teaching language (listening and speaking) skills and cultural awareness, these enriched FLES classes also reinforce part of the content subjects during FLES time as well. For example, if a third grade class is studying about magnets in science class, the foreign language lesson could center around the same topic, providing hands-on experience. Besides science skills, this type of program can be used to reinforce arithmetic, language arts, music and art activities, and is especially adaptable to the teaching of social studies and geography lessons since FLES classes generally include some of that subject matter already.

Two-Way Bilingual (Interlocking) Program

Two-way bilingual programs, also referred to as interlocking programs, are content-based programs very similar to the immersion model. The main difference is that there are two types of students in the same class--those whose native language is English, and those whose native language is the second language. The dual goals of the program (in addition to the mastery of the regular curriculum) are for the English speaking students to become functionally fluent in the second language and the second language speakers to become functionally fluent in English.

WHAT MATERIALS AND RESOURCES ARE AVAILABLE?

While this section deals primarily with materials that are used in immersion and partial programs, they may be suitable for other programs as well. There is a critical need for teaching materials that are appropriate for immersion programs. Most immersion programs are required to use the standard school-wide curriculum, so the school systems themselves usually translate and adapt the designated curriculum into the immersion language.

Currently, many schools develop their own materials, supplementing these materials with those from other countries, which they adapt to their curriculum. Materials from outside the United States often require considerable adaptation because they are based on curricula or pedagogical approaches that are not appropriate for U.S. schools. Material may need to be adapted to accommodate any of the following characteristics: 1) too much religious emphasis; 2) different teaching methodologies; 3) concepts taught in a different order than in a U.S. curriculum (especially in arithmetic); 4) cultural differences; and 5) dialect differences, (for example, southwest U.S. Spanish materials may contain different dialect features from Puerto Rican Spanish in New York).

Although they may be hard to find, many helpful materials are available. American publishing companies have produced some French and Spanish texts that are appropriate for immersion programs, and excellent French materials can be obtained from Canadian sources. (See bibliography in Rhodes, 1983). Also, some school systems have made their locally developed material available through the ERIC system.

HOW ARE TEACHERS BEING PREPARED FOR THESE PROGRAMS?

Teacher Training

At present there are no formal teacher-training programs--it's "on-the-job training!" Some teachers are language specialists while others are elementary teachers who are bilingual.

According to Burks (1984), a survey of requirements for elementary school certification showed that none of the 14 states offering immersion programs list separate certification requirements for immersion teachers. Therefore, a

specific set of criteria may not necessarily have been met by all immersion teachers. The result of this lack of certification requirements for teachers is that individual schools must do all their own teacher training. There is much interest among the programs in developing a model for an immersion teacher-training institute.

A doctoral candidate at Salisbury State College, Arlene White, is addressing the issue of qualifications of immersion teachers in her dissertation. She hopes to find answers to the following questions:

--- What certification requirements are met by immersion teachers and what qualifications must an immersion teacher have in order to be offered a job?

--- Are there shared characteristics of immersion teachers across states and are there shared criteria for knowledge and skills?

--- Have the academic training and professional experiences of immersion teachers adequately prepared them for the immersion classroom?

--- Will principals and teachers perceive that these professional and attitudinal criteria have the same or different level of importance?

Teacher Requirements

Elementary school immersion programs ideally require teachers who are fluent in a foreign language and who have elementary school certification. Some schools meet this requirement by hiring native-speaking teachers with teaching certification from their native countries. Although these teachers are often excellent language models, their teaching methods must often be modified to American educational practices. Classroom management is sometimes a problem for foreign teachers who are accustomed to the classroom setting in their native country. Therefore, they must be familiar enough with the American teaching system to be good leaders.

Another option for immersion programs is to hire native English-speaking-teachers with elementary certification who are fluent in the foreign language being taught. Often school administrators will feel justified in using someone who is known to be a very good teacher, even if this person is not a native speaker of the language.

Some schools with language immersion programs have opted to hire bilingual teachers holding state teaching certificates in some other subject area, with the stipulation that they immediately begin working toward their elementary teaching certificate.

Recommended Immersion Teacher Competencies
(agreed upon by conference participants)

--- near-native fluency (4 or 5 on FSI scale or 3 on new ACTFL scale);

--- knowledge of content area;

--- knowledge of strategies to teach language (according to levels);

--- knowledge of strategies to teach content (according to levels);

--- ability to use strategies to clarify subject content and contextualize the lesson;

--- ability to use child's first culture to mediate instruction;

--- ability to build in cultural context and make a bridge between first and second cultures;

--- ability to integrate parents into the learning process; and

--- ability to assess and adapt materials.

WHAT TEACHING METHODS/TECHNIQUES/STRATEGIES ARE BEING USED?

Suggested immersion teaching techniques:

--- use of controlled vocabulary at the beginning;

--- use of only the second language, but acceptance of English from children;

--- constant comprehension checks;

--- contextualized clues to help convey meaning (props, realia);

--- separation of use of languages; and

--- teaching reading using language experience approach (with phonics); students give teacher sentences to write on the board, then they read what they know orally.

WHAT PLACEMENT AND ASSESSMENT PROCEDURES ARE BEING USED?

For immersion programs in general, students are placed in their appropriate age-grade level. Some students in grades 4-6, who have not had previous immersion experience, are placed in lower grades to learn more basic language and to act as teachers' helpers. The Metropolitan Readiness Test (MRT) is sometimes given to determine if students are language delayed and to counsel parents about their child's ability to participate in immersion programs (Milwaukee Public Schools). However, no child is refused on the basis of testing, since the immersion experience has proven beneficial to below-average students.

7. SECONDARY GRADES - CONTENT INSTRUCTION IN FOREIGN LANGUAGES

WHAT KINDS OF PROGRAMS EXIST?

Only a limited number of U.S. schools provide content instruction in foreign languages at the secondary level. Those that do are often the junior high or middle school continuations of elementary immersion programs in the same school district. Unfortunately, the sequence often isn't extended into the high school. Articulation of foreign language programs throughout the elementary and secondary levels remains a perennial problem.

Content area foreign language courses in secondary schools are usually taught in Spanish, French, or German. The subjects most frequently offered are social studies, history and geography; science and math classes in foreign languages are much less frequent. Courses for speakers of languages other than English are quite rare. Nevertheless, Spanish courses for Spanish speakers with varying degrees of literacy are available in districts such as the Hartford (CT) Public Schools. (Contact person: Adnelly Marichal, Hartford Board of Education, 249 High Street, Hartford, CT 06103). However, such courses are often language arts oriented.

There are several reasons for the lack of content-based instruction in foreign languages at the secondary level. First, the secondary requirements for graduation often do not permit time for such "elective" courses, and foreign language courses are not always required for a high school diploma. In contrast to ESL, foreign language (FL) classes are often still viewed as a "luxury," rather than a necessity, and are early candidates for elimination when there are budget cuts. Moreover, teachers at the secondary level are usually certified to teach only one specific subject area. Thus, it is difficult to find a teacher who is qualified to teach both language and a content class such as math or science. It is also difficult for schools to arrange teaching schedules to permit extra courses or team teaching by a foreign language and a content teacher. Nevertheless, there are school districts who see the importance of integrating languages and content instruction and are willing to put forth the effort to offer such programs. (See Appendix A for a description of sample secondary FL programs).

WHAT MATERIALS AND RESOURCES ARE AVAILABLE?

The lack of appropriate materials for content classes in foreign languages is another obstacle to their implementation. Most available materials are for language learning and culture. Commercially-published content textbooks in foreign languages do not usually meet the requirements of standard county or school-wide curricula. Thus, the teachers usually have to translate designated curricula and adapt tests, a task for which they are often unprepared or have insufficient time to accomplish. Supplementary texts and materials from other countries may be used, but these materials must be adapted to the language level of the non-native speakers and to the local curriculum.

HOW ARE TEACHERS BEING PREPARED FOR THESE PROGRAMS?

Teacher Training

There are currently no formal teacher training programs for content-based language instruction. Teachers are trained to teach a specific language or a specific content area at the secondary level. What training is provided to language teachers to teach content (or vice-versa) must be given during in-service or "on the job training." The various types of skills necessary for such teachers are difficult to develop in short in-service sessions. Thus, more focused pre-service training is needed to get ahead of the problem.

Teacher Requirements

One major issue is whether to begin with foreign language teachers and instruct them to teach content or to train content teachers who are proficient in a language. Both are necessary to fill the gaps in instruction, but certification requirements must be met, in either case. One solution is for school districts to help bilingual education teachers who are certified in the elementary grades extend their certification to the junior high level. However, this does not solve the problem for the high schools where "subject matter" and language classes have traditionally been separate domains.

WHAT TEACHING METHODS/TECHNIQUES/STRATEGIES ARE BEING USED?

A difficult problem facing the secondary teacher is the various levels of language proficiency of students found in one classroom. Some students may have been in elementary immersion, FLES, or FLEX programs, and others may have had no previous foreign language exposure whatsoever. Suggested techniques for use with non-homogeneous classes are:

--- multi-level grouping;

--- peer teaching and individual instruction;

--- supplementary assignments for advanced students;

--- graphics -- maps and charts; and

--- "hands-on" activities.

The multi-level problem is met in one school by having "intensive" classes for those students who don't speak the target language at home and "regular" language classes for those who do. (See sample program of Washington International School).

8. ISSUES AND NEEDS IN CONTENT-BASED LANGUAGE INSTRUCTION

MATERIALS AND CURRICULUM

A critical need at all levels of content-based instruction is for theoretically and methodologically sound materials, such as curriculum guides, student texts, supplementary materials (including computer-assisted instructional materials), and teacher resources. This critical shortage of materials and curricula is aggravated by the reluctance of publishers to produce content-based series in various languages for a "limited" market.

Using the above situation as a framework for future directions, conference participants suggested the following actions:

--- development of new curricula which achieve district objectives, but meet the instructional level and interests of students, and which develop both language skills and content concepts simultaneously over a long-term scope and sequence;

--- curriculum development as a team effort, including the input of curriculum specialists, language teachers and content teachers, to ensure an integrated approach, and not a language or a content emphasis; and

--- securing adequate resources (personnel, time, funds) to accomplish the necessary tasks.

As regards text development, the following strategies were outlined:

--- training teachers to produce their own texts;

--- adaptation of existing texts to meet linguistic, sociolinguistic, and cultural considerations--content should be made culturally sensitive and comprehensible to students at various levels of proficiency;

--- production of linguistically-oriented foreign language texts which are more content-based and communicative/functional in approach;

--- development of more low level/high interest materials for older students who have content knowledge but are weak in language skills;

--- development of appropriate supplementary material--visuals such as charts and maps, worksheets and vocabulary lists, and materials which allow pair and group work;

--- improvement of computer-assisted instruction (CAI) materials which go beyond the drill and practice stage;

--- exploration of possibilities for use of content-based computer software;

--- development of teacher resources, including teacher's editions and guides to textbooks, guidelines for unit/lesson planning, practical strategies or "how to" manuals;

--- preparation of instructions on how to build language into content courses and vice-versa;

--- preparation of instructions on how to modify language for comprehension without "watering down" the curriculum; and

--- preparation of guidelines for adaptation of materials for local curriculum needs when the content is very specific (e.g., state history).

DISSEMINATION AND EVALUATION

The dissemination of information about content-based materials is naturally a major concern for educators. If local adaptation of existing texts is to be the immediate answer to the problem of providing suitable content-based materials, information sharing among programs would substantially diminish the work of all. Identified as potentially very useful were:

--- a listing of local adaptations/translations of various published materials;

--- a listing of unpublished materials and resources; and

--- a means for exchanging copies of these materials among schools having similar courses to facilitate the growth of programs nationwide.

In this last respect, it was mentioned that CLEAR could provide networking, serving as a kind of clearinghouse for information dissemination.

With regards to the evaluation of content-based materials, a standard grid for evaluation of unpublished materials or a rating system to validate the existing published ones is indispensable if objective remarks or reviews about them are to be shared. In the area of foreign languages, CLEAR has already developed "Criteria for the Evaluation of Secondary and Post-Secondary Language Teaching Materials in the Commonly and Less-Commonly-Taught Languages," based on the ACTFL Proficiency Guidelines. However, standardized evaluation criteria are still needed for elementary FL and ESL materials.

METHODOLOGY AND PROGRAMS

Before a widespread approach to dual language programs can be designed, several outstanding questions must be addressed:

--- What are the leading methods and prevailing views about the teaching of content-based material
-in English to multilingual LEP students?
-in foreign languages to English-speaking students?
-in their own language to speakers of other languages?

--- How do these methodologies overlap?

A developing methodology that meets the specific academic and language needs of both language-majority and language-minority students in interlocking or "bilingual immersion" programs includes:

--- a variety of grouping and classroom organization strategies;

--- innovative techniques such as "sustained silent reading" and cooperative learning.

A "taxonomy of models" providing different options and solutions would be useful for teacher reference so that the relative success of the numerous methods, techniques, and teaching strategies in such programs across the country could be shared. A forum for exchanging information, especially between bilingual, ESL and FL teachers and researchers, could greatly assist various endeavors to develop interlocking programs enrolling both majority as well as minority language students.

TEACHER TRAINING AND CERTIFICATION

Teacher training for content-based language instruction is an immediate concern. Both pre- and in-service training are necessary and will require cooperation and communication among institutions of higher education, research organizations, and school districts to develop meaningful teacher training programs. Such coordination will pay off in the skills of future content-based language instructors, but the urgent training needs of present educators require immediate, in-service training strategies such as the following:

--- staff development plans which include teachers, school principals, and other administrators;

--- on-going teacher training via college courses or summer institutes and via workshops or in-service programs in local school districts;

--- professional leave granted for additional training whenever possible to avoid overdoing the in-service experience;

--- more inter-disciplinary training (from pedagogy, linguistics, anthropology and psychology), involving a "trainer of trainers" approach;

--- opportunity for teachers to observe master teachers and to interact and share resources and knowledge;

--- demonstrations of teachers using successful approaches and instructional techniques and managing non-homogeneous groups in the classroom;

--- materials preparation and adaptation training;

--- additional language training for content teachers; and

--- instruction in teaching specific subjects for language teachers.

For success in these goals, federal support is needed to upgrade teacher education, including not only ESL teachers, but all teachers of language-minority students. Additionally, to accommodate content-based instruction or interlocking programs, the State Boards of Education may have to revise their certification requirements.

PLACEMENT AND ASSESSMENT

The issues of placement and assessment of students are important for content-based instruction and interlocking programs. Both language minority and majority students are involved, and both language and content should be included. Placement currently focuses on the language minority student and assessment is directed to language proficiency. The content areas and the language majority student must be considered.

A primary question is to what extent are content tests language dependent or culturally biased? Content tests should test content, while language tests should test language. But when the two are integrated, it becomes difficult to separate them. When students take content tests in their second language, there is the strong possibility that the language and culture factors will affect the outcome of the test. The reverse is true as well. Researchers and teachers must closely examine the various factors which affect the validity of content tests and language tests.

Often students with good content skills are held back due to their performance on language proficiency tests. These tests need to be examined in light of issues such as cultural bias and content mastery. Current language proficiency tests often do not seem to measure the "real" language skills students need to function and achieve academically.

Some school districts have assessment centers where LEP students are tested for L1/L2 language proficiency and content knowledge. This procedure minimizes the chances of LEP students being "identified incorrectly" or being mainstreamed into the regular classroom before they are able to cope with academic English instruction.

With content-based ESL and FL immersion, a major question concerns what skills to measure in which language(s). Presently, FL immersion students are being tested exclusively in English on standardized tests. Some educators feel that at this time it is not a priority to develop instruments to test content in FL, but rather that the priority is to develop tests to assess language proficiency at elementary levels of instruction. Nevertheless, other educators, especially ESL/bilingual teachers, think that both language proficiency and content knowledge tests need to be developed.

Currently, results are available for language arts and reading in another language, but test results are lacking in other content areas. The qualitative measures of achievement in content mastery should be documented beyond the local classroom. Overall, testing needs to be standardized if comparisons are

to be made between the various methods and programs of content-based instruction.

In sum, there is a critical need for better placement tests, language proficiency tests at lower levels, and academic content tests in various languages.

RESEARCH

Additional research is called for in the categories of: materials and curriculum; methodology and evaluation of programs; teacher training and classroom implementation; and evaluation and dissemination of information, which is an overriding concern in all the above areas.

Most pressing is the need to validate the claim that integrating language and content is effective. (cf. Mohan, 1986; Chamot, 1985). More studies, such as those done by Kessler and Quinn (1984, 1985a,b) on cognition and language in science learning for LEP and bilingual students, and by Mestre (1984, 1986a,b) on the problems that mathematical language poses for these students, must be conducted and shared with educators. Teacher training models, such as the one provided by Cuevas (1985), are also necessary.

"Hard data" and documentation for comparison of established programs and convincing results for administrators and teachers alike should be presented. Documentation should include the following:

--- the relative merits of immersion, bilingual and interlocking programs;

--- the comparative results of pull-out, high intensity language training (HILT) and other types of ESL programs;

--- the relative success of various methodologies and teaching strategies; and

--- the outcome of programs that utilize ESL teachers to teach content and those that utilize content teachers to teach content.

Criteria for evaluation of such, however, must first be established and "standardized." The set of criteria upon which a model is built or a program is judged should be defined. Model designs for evaluation are needed. An investigation of the set(s) of criteria already used in the validation process is called for and new approaches for evaluation should be recommended.

For example, in evaluating programs, both researchers and teachers need to know what actually is happening in the classroom. Therefore, more emphasis is needed on the process (observation and description) rather than on the product (results and assessment). Frequently, evaluations are product-oriented and tend to draw attention away from what is happening in the classroom. More could be learned from studying the actual process involved.

Once adequate measures are taken to evaluate programs, including materials and methods, as well as teacher preparation, this information must be shared among researchers and educators across the nation. The information about exemplary programs can be disseminated via standard reports, by annotations and reviews in professional publications or by personal networking at conferences. However, a larger and more systematic method of information dissemination is essential. Otherwise, recent studies and reports risk never being shared or improved upon.

Finally, and most importantly, the gap between researchers and educators should continue to diminish, and the exchange between research findings and classroom applications should increase, to ensure a strong foundation for the integration of language and content.

9. CONCLUSION

FUTURE DIRECTIONS FOR CONTENT-BASED LANGUAGE INSTRUCTION

G. Richard Tucker, Center for Applied Linguistics

Content-Based Concerns

The goal in Canada, from 1965 through 1978, of increasing the French language proficiency of Anglophone youngsters was relatively straightforward in comparison to the situation which American educators now face in the education of limited-English-proficient students (LEPs). The number of American youngsters who do not speak Standard English--the de facto if not de jure language of formal classroom instruction, the language of texts, and the language of examination--is increasing rapidly and dramatically. The particular educational needs of individuals for whom Standard English is not the mother tongue or a habitually-used language are making themselves felt on all levels--from preschool through adult education. One by-product of such a situation is a rapidly increasing number of youngsters seeking access to advanced study in other languages. Additionally, shifting demographic patterns and rising fertility rates among language minority communities are putting an extra burden on the system in general and are distributing the LEP population unevenly.

Having identified the integration of language and content instruction as an important area for further development and support, CLEAR called together a number of educators, administrators and researchers to identify problems in integrating language and content instruction, and to delineate the ways in which CLEAR may help in the solution of these problems.

During the seminar five major problematic areas were identified. First, it was noted that teachers are usually required to follow a standard curriculum, particularly in grades K-12. Second, in addition to the standard curriculum, there is often a set of test requirements or a set of state competencies that students must master. These two issues make curriculum development and testing particularly difficult, as teachers are forced to adapt or translate existing English curriculum materials and to prepare students for standardized testing in English.

Third, teachers are confronted with two major sources of variation in their students: the language proficiency of entering students and their educational and experiential backgrounds. In American schools, for example, one finds language-majority, English-mother-tongue youngsters who have lived their entire lives in the U.S. alongside language-majority, English-mother-tongue youngsters who have lived for extensive periods abroad, and who have been exposed to and participated in other languages and cultures. One finds groups of language-minority students who have lived and have been educated entirely in the U.S. alongside language-minority youngsters who have been educated partially in their own countries. There are others who have arrived in this country at disparate ages, with no education whatsoever, many from basically non-literate or even preliterate societies. A further complication is the uneven distribution of this student population among the Local Educational

Agencies (LEAs) and an uneven distribution of national education resources throughout the various LEAs. Many of the most heavily-impacted areas are not those with a tax base capable of supporting the extra burden. (For example, it is reported that the Hartford, CT School District serves the fourth poorest urban LEA in the second richest state in the country).

Fourth, immediate integration of language and content instruction in most cases is impossible due to a lack of texts. It was noted that while text availability is less problematic at the elementary level than at the secondary, the consistent availability of texts in languages other than Spanish is extremely rare. With respect to the less- or uncommonly-taught languages, there are virtually no texts. Additionally, where texts are available, they are rarely accompanied by teachers' guides or other supplementary materials necessary for appropriate implementation.

The fifth issue of concern was in the area of teacher training. The need for pre- and in-service teacher training in content and language methodology was set against the backdrop of differential training needs, in terms of language proficiency and content mastery.

Activities for CLEAR

Specific attention was directed throughout the seminar to the part that CLEAR could play in helping to address these needs and concerns. It was noted from the outset that whatever role CLEAR fills, the vast resource network already in place must be utilized. Thus, CLEAR would cooperate with the National Clearinghouse for Bilingual Education, the 16 ERIC clearinghouses, the newly-funded regional laboratories and centers, and finally, the 16 BEMSCs across the country (currently being recompeted) in the following proposed activities.

CLEAR could take the lead as an information clearinghouse to collect and broadly share information about innovative content-based language programs, quantifying the kinds of approaches and models that are currently being used.

In the area of materials assessment and development, CLEAR could develop criteria for materials evaluation and undertake an exhaustive collection of unpublished, as well as published materials, for use in content-based programs. An advocacy role was defined in this area, whereby CLEAR could inform groups such as the National Coordinating Council for Bilingual Education and the Association of American Publishers of the need for systematic and complete review of available materials, along with a comprehensive agenda for materials development needs.

In the area of teacher preparation, it was agreed that CLEAR could take the lead in describing the features or components that are critical for teacher education programs for dissemination to coordinators of such programs though the committee chairs of ACTFL, NABE, and TESOL. Likewise, CLEAR could present representatives of OBEMLA with our teacher education agenda for their consideration when drafting regulations for the Title VII training programs.

Several areas for potential research were identified. For example, there is virtually no systematic, longitudinal evidence with regard to the pedagogical efficacy of content-based courses. Mohan (1986), among others mentioned previously, has provided notable counter-examples, but in fact, there is no documentation to make a strong case for further model development. Robust operational definitions are lacking that would allow us to make meaningful comparisons of the situations in various sites.

Despite the enthusiasm engendered by the seminar, it was continually noted that although the implementation and evaluation of content-based language instruction and interlocking programs should be accorded high priority, it must be remembered that large numbers of LEP students will never participate in bilingual education, much less interlocking or two-way bilingual programs, and that large numbers of language majority youngsters who might like to acquire facility in a foreign language will not participate in immersion programs, two-way bilingual or interlocking programs. Thus, while a research agenda which will help in examining the relative efficacy of interlocking programs and the conditions under which they work is desirable, other educational treatments or programs in which significant numbers of youngsters will participate must not be ignored.

With respect to assessment issues, understanding language proficiency measurement to the extent that one might meaningfully describe and compare the proficiency of students of Spanish in New York and Nevada, for example, is still a high priority. Even more importantly, however, is the need for a common matrix or framework for assessment and description that would make possible a statement about the relative proficiency of a student for whom Spanish was the target language in relation to a student for whom Hmong was the target language.

Finally, it was recognized that the continuation of the dialogue among foreign language educators, bilingual educators and ESL educators is imperative. The kinds of issues discussed above cut across the backgrounds, training and needs of our students, and clearly indicate that problem solving will only be the result of shared information across disciplines, systems, and programs. CLEAR can, and must, take the lead in seeking ways to enhance dialogues of the type begun in the Seminar on Integrating Language and Content Instruction, and we must be creative in looking for avenues in which to do this.

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APPENDIX A. CONTENT-BASED LANGUAGE INSTRUCTION: SAMPLE PROGRAM DESCRIPTIONS

(Presented in alphabetical order)

PROGRAM LOCATION:	Alamo Heights School District San Antonio Public Schools, Texas
GRADES INVOLVED:	9-12
TYPE OF PROGRAM:	ESL pull-out
LANGUAGE(S):	English is medium of instruction
CONTENT AREA(S):	science, math, social studies, homemaking
CURRICULUM:	teacher materials for individualized program
MATERIALS:	Scott Foresman's English for a Changing World; teacher's book forthcoming: Science Discoveries for Language Learners
COMMENTS:	The focus is on content rather than language learning. Counselors and teachers identify students who need help with the language. These students receive special assistance via group and individual activities. Student ethnic groups include Cambodian, Japanese, Persian, Spanish, Thai, and Vietnamese.
CONTACT PERSON:	Dr. Mary Ellen Quinn Alamo Heights High School 6900 Broadway San Antonio, TX 78209 (512) 826-2316

PROGRAM LOCATION:	Arlington Public Schools Arlington, Virginia
GRADES INVOLVED:	K-12
TYPE OF PROGRAM:	High Intensity Language Training (HILT) and English for Speakers of Other Languages (ESOL) for LEP students
LANGUAGE(S):	English is medium of instruction; bilingual support available in most schools
CONTENT AREA(S):	social studies, math, and science; U.S. history and geography; vocational education
CURRICULUM:	different curricula available for elementary and secondary ESOL/HILT; curricula include: -Primary HILT and Beginning Elementary HILT -Elementary HILT Curriculum Guide -Secondary HILT/HILTEX Reading/Writing/Study Skills Guide -Secondary HILT/HILTEX Grammar/Listening -Beginning Social Studies for Secondary HILT Students -Secondary Social Studies Curriculum Guide -Secondary HILT/HILTEX Communications Skills
MATERIALS:	adopted ESL grammar texts; adopted mainstream basal reader program; supplementary materials for language arts; mainstream content area textbooks with adapted materials; teacher-made workbooks and instructional materials
COMMENTS:	ESOL/HILT classes are offered to all LEP students in the Arlington Public Schools. The purpose of the program is to equip LEP students with the language and communication skills needed for participation in the mainstream. The program is competency based and only those students who demonstrate mastery of specific program objectives exit into the mainstream. Certified ESL teachers teach the ESOL/HILT classes.
CONTACT PERSON:	Emma de Hainer ESOL Supervisor Education Center 1426 N. Quincy Street Arlington, VA 22207 (703) 558-2091

PROGRAM LOCATION: Arlington Public Schools
Arlington, Virginia (implementing site)

TYPE OF PROGRAM: "Trinity-Arlington Teacher and Parent Training for School Success Project"--a parent involvement program for limited English proficient students including a vocationally oriented student curriculum in four languages (an ESEA Title VII Project)

TARGET AUDIENCE(S): high school LEP students from four language backgrounds: Khmer, Lao, Spanish, and Vietnamese

PROGRAM OBJECTIVES: The main goal of the project is to facilitate English language development by focusing on those English skills related to career and vocational education. This is achieved through the development of supportive relationships between the students, their parents, and school staff via a Vocationally-Oriented Bilingual Curriculum (VOBC).

PROGRAM DESCRIPTION: To achieve the above goal, the project:
-trains high school ESL teachers, counselors and administrators via two graduate courses. Participants develop the VOBC and are trained to implement the program and to work with parents;
-adapts and translates the VOBC into the four target languages. (VOBC will be pilot tested in spring 1986 and revisions will be made);
-trains the parents of LEP students to work supportively with their children and school;
-involves bilingual community liaisons in all aspects of the program; and
-implements a training symposium during April 1986 for educators from one or two replication sites for the VOBC.

RESEARCH COMMENTS: By the end of 1985-86, data will have been collected to determine the impact of the program and the VOBC, including student attitude changes and absenteeism and dropout rates. (The Trinity-Arlington project was previously implemented at the elementary and intermediate levels with positive findings.) The VOBC, teacher's guide and two training videotapes are also available.

CONTACT PERSON: Dr. Carmen Simich-Dudgeon, Project Director
Trinity College, Education and Counseling Department
Washington, DC 20017
(202) 939-5136

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PROGRAM LOCATION:	Cincinnati Public Schools Cincinnati, Ohio
GRADES INVOLVED:	K-5
TYPE OF PROGRAM:	partial immersion
LANGUAGE(S):	French and Spanish
CONTENT AREA(S):	science, social studies, math, handwriting; art, music, and physical education
CURRICULUM:	school system developed a special curriculum for the partial immersion program
MATERIALS:	American textbooks compatible with the specially designed curriculum; additional materials from foreign publishers complement needs of program; teacher-made materials developed for specific lessons more frequently used
COMMENTS:	Partial immersion teachers must have kindergarten or elementary certification. Some teachers are native speakers while others are North Americans who have demonstrated their proficiency in the language. The only criterion for admission to the partial immersion program is racial balance. The school system tries to have the classes reflect the district's racial balance.

Other variations presently being offered through the Academy of World Languages:

1. Modified immersion model--foreign language teacher instructs students for about 60 minutes daily in art, music, and physical education, reinforcing skills and concepts with activities specific to the language and culture being studied. Arabic, Chinese, Japanese, and Russian are offered.

2. Bilingual model--foreign language teacher sees students about 70 minutes daily. The L2 teacher drills, reinforces, and enriches the content taught by the English teacher. This model is offered in French, German, and Spanish. Students from all the programs described above may elect to continue their language study in grades 6-8 by attending the Cincinnati Bilingual Academy. The International Studies Academy receives students in grades 9-12, in either the International Studies Program or the International Baccalaureate Program.

CONTACT PERSON: Nélida Mietta-Fontana, F. L. Supervisor
Cincinnati Public Schools
230 East 9th Street
Cincinnati, OH 45202
(513) 369-4937

PROGRAM LOCATION: District of Columbia Public Schools
Oyster Bilingual Elementary School

GRADES INVOLVED: K-6

TYPE OF PROGRAM: two-way bilingual immersion

LANGUAGE(S): English and Spanish

CONTENT AREA(S): elementary curriculum, including science, social studies, math, language arts/reading

CURRICULUM: D.C. curriculum K-6 and Spanish translations; Spanish Language Arts and Reading Curriculum (Lengua Gramática y Lectura) PK-6, the D.C. Schools official Competency-Based Curriculum

MATERIALS: Holt, Rinehart math series, Silver Burdett science series, Weiss reading series; teacher-developed and adapted materials

COMMENTS: A team teaching approach is used; one native Spanish speaker, one native English speaker. 60% of the students are Hispanic; most are native Spanish speakers.

Grades PK-6 are bilingual with daily instruction provided in both English and Spanish in reading and language arts. Language for content areas (science, social studies, math) varies according to periodic rotations.

New students in grades 3-6 receive ESL or SSL instruction until they have acquired sufficient skills to participate in the two-way bilingual immersion program.

Achievement scores at grades 3 and 6 are above national norms. Lowest scores, although still above national norms, are in English comprehension. Language arts and reading tests in Spanish are available. No standardized national tests are available in Spanish.

Educational philosophy of school is to develop bilingual literacy.

CONTACT PERSON: Paquita Holland, Principal
Oyster Bilingual Elementary School
29th and Calvert Streets, N.W.
Washington, DC 20008
(202) 673-7277

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PROGRAM LOCATION:	Fairfax County Public Schools Fairfax, Virginia
GRADES INVOLVED:	K-12
TYPE OF PROGRAM:	1 to 3 hours of ESL and content instruction, depending on student's language proficiency; elementary school-based programs for large concentrations of ESL students; cluster and center programs for low enrollment of ESL students in one centrally located school
LANGUAGE(S):	English is medium of instruction
CONTENT AREA(S):	elementary: social studies, math, and language arts; secondary: math, science, biology, social studies, U.S. and Virginia government
CURRICULUM:	elementary curriculum developed by teachers; biology for ESL students, U.S. and Virginia government, transitional English 9 and 10
MATERIALS:	a wide variety of teacher-made materials; adopted texts and handouts for biology and U.S. and Virginia government; teacher-adapted regular classroom materials and texts
OTHER COMMENTS:	ESL and content are taught by different teachers. ESL classes do not earn graduation credit (regular English courses are also required); content courses count for graduation credit.
CONTACT PERSON:	Esther J. Eisenhower ESOL Coordinator Fairfax County Public Schools Lacey Instructional Center 3705 Crest Drive Annandale, VA 22003 (703) 698-7500

PROGRAM LOCATION:	Milwaukee Public Schools Milwaukee, Wisconsin
GRADES INVOLVED:	K-8
TYPE OF PROGRAM:	total immersion
LANGUAGE(S):	French, German, and Spanish
CONTENT AREA(S):	all subjects except music, art, and physical education
CURRICULUM:	Milwaukee Public School standard curriculum adapted for use in Spanish, French, and German
MATERIALS:	materials selected on the basis of how closely they approximate the standard school curriculum; a combination of foreign and American texts and many teacher-made materials used
COMMENTS:	Teachers are elementary certified with demonstrated proficiency in the second language. They are a mixture of native and non-native speakers, with the latter predominating. Because of a shortage of teachers, some have been recruited from Belgium and Canada. Students are from every socio-economic level and every geographical part of the city and suburbs. Students come from different racial backgrounds and 42% of the students in the program are minorities. There are no selection criteria for the program. Students continue at the middle school level where three subject content courses are taught.
CONTACT PERSON:	Helena Anderson Curtain Foreign Language Curriculum Specialist Milwaukee Public Schools P.O. Drawer 10K Milwaukee, WI 53201-8210 (414) 475-8305

PROGRAM LOCATION: Montgomery County Public Schools, MD
Eastern Intermediate School

GRADES INVOLVED: 7-8

TYPE OF PROGRAM: partial immersion; 2 hours per day: 1 hour - language arts, 1 hour - social studies

LANGUAGE(S): French and Spanish

CONTENT AREA(S): social studies (history and geography of the world)

CURRICULUM: adapted social studies guides from the county school curriculum

MATERIALS: teacher-made and adapted from guides; French books from Canada and France

COMMENTS: Traditionally, the program has consisted of 25% minority students. Hands-on, peer tutoring, individualized instruction, and suplementary assignments are techniques used to deal with non-homogeneous groups.

In addition to graduates of elementary immersion programs, the program is expanding to allow late entry for students who have experience in the foreign languages through living abroad or as native speakers.

CONTACT PERSON: Marie-Cécile Louvet
Eastern Intermediate School
300 University Boulevard
Silver Spring, MD 20901
(301) 588-2720

PROGRAM LOCATION:	Montgomery County Public Schools, MD Oak View Elementary School
GRADES INVOLVED:	K-6
TYPE OF PROGRAM:	total and partial immersion
LANGUAGE(S):	French and Spanish
CONTENT AREA(S):	all except art, music, and physical education
CURRICULUM:	Montgomery County standard curriculum adapted for use in French and Spanish
MATERIALS:	a combination of foreign and American texts and many teacher-made materials
COMMENTS:	Teachers must be fluent in French or Spanish and are required to have certification at some level. Teachers without elementary certification must agree to work toward it. Peer teaching is used with older students, especially new students in grades 4-6 with limited language skills. These students are assigned to a classroom in the younger grades where they can learn the basic level of language as well as assist the teacher.
CONTACT PERSON:	Betty Knight Morgan Oak View Elementary School 400 East Wayne Avenue Silver Spring, MD 20901 (301) 589-0020

PROGRAM LOCATION: Prince George's County Public Schools
Upper Marlboro, MD

GRADES INVOLVED: K-12

TYPE OF PROGRAM: ESOL pull-out at elementary level;
1-2 periods daily at secondary level

LANGUAGE(S): English

CONTENT AREA(S): social studies and science; U.S. history and civics

CURRICULUM: ESOL elementary and secondary curriculum guides for beginning and intermediate levels of proficiency

MATERIALS: modified materials for 7th and 8th grade social studies and science developed in county; learning packets in U.S. history and 9th grade civics developed by other Maryland LEAs. (County-approved classroom instructional materials list available.)

COMMENTS: ESOL instructional services include a center program in schools with a high concentration of ESOL students and an in-school program where the number is limited. ESOL centers are staffed by trained ESOL teachers who provide regularly scheduled intensive English courses to elementary and secondary school students. For in-school programs, ESOL staff provide help in developing a program of language instruction, curriculum guides, materials and demonstration lessons, cross-cultural information, aid in modification of instruction for content areas, reassessment of students' progress, and more advanced instructional materials as students' proficiency increases. ESOL personnel use a variety of tests to evaluate English language proficiency. ESOL services include in-service workshops for school faculties and State Approved Workshops/Modulated Experiences (SAW-MEs) which provide strategies for helping the ESOL student in the regular classroom.

CONTACT PERSON: Lillian M. Falk
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Prince George's County Public Schools
ESOL Administrative Office
6366 Greenbelt Road
Greenbelt, MD 20770
(301) 474-9080

PROGRAM LOCATION: University of California, Los Angeles
Los Angeles, California

GRADES INVOLVED: in-house teacher training institute

TARGET AUDIENCE: regular classrom teachers (K-6) of LEP students who have already attended the content area (math and science) institutes also provided in the area

PROGRAM OBJECTIVES: The principal objective is to delineate ways in which content material such as math and science can be presented effectively to groups of mixed LEP students in traditional classrooms with monolingual English-speaking teachers who have not been trained to deal with these students.

PROGRAM DESCRIPTION: UCLA's Linguistic Minority Project Summer Institute is being planned for 1986 as a teacher development program to provide training in techniques for presenting math and science materials in multi-linguistic classrooms. A three-week summer program with a series of follow-up workshops during the academic year is planned.

RESEARCH COMMENTS: The institute will concentrate on approaches such as: 1) development of materials in sheltered English; 2) use of small instructional groups based on student's L1 and/or English ability; 3) use of peer tutors as part of classroom instruction.

Other training programs at UCLA include:

a) development of a tutorial training program to prepare college students to teach elementary students math and science.

b) summer institutes for secondary (9-12) foreign language teachers based on communicative approach. For 30 minutes a day during 3 weeks, teachers are given instruction communicatively in a new language.

CONTACT PERSON: José Galván, Director of Foreign Language Program
Office of Academic Interinstitutional Prog.
Gayley Center
University of California, Los Angeles
Los Angeles, CA 90024
(213) 206-1880

PROGRAM LOCATION: University of Miami
Miami, Florida

TYPE OF PROGRAM: teacher training--inservice workshops for math and language teachers

TARGET AUDIENCE: ESL and math teachers

PROGRAM OBJECTIVES: The main goal of the training is to develop strategies for teachers to use in teaching integrated math and language by giving practical "how to" guidance for teachers of LEP students.

PROGRAM DESCRIPTION: The program currently concentrates on grades 1, 3, and 5 where there is a critical need because of the Florida State Competency Exam. Researchers started with the objectives of the exam which seemed to present the most problems for LEP students and tried to determine if the problems were language based or not. The training focuses on operations, concepts, applications, and problem solving not found in textbooks.

RESEARCH COMMENTS: In a cross-ethnic study of students in this program, student groups did better in math regardless of the ethnic group or language proficiency. The major advantages of the program are the demonstration lessons in the classrooms and the fact that university researchers are involved with teachers in practical applications and implementation.

Research papers on the study results are available.

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(305) 284-4100

PROGRAM LOCATION: Washington International School
Washington, DC

GRADES INVOLVED: Junior House = nursery (age 3)-age 10
Upper School = ages 11-17

TYPE OF PROGRAM(S): partial immersion (course sequence and contact hours vary with age levels)

LANGUAGE(S): French and Spanish

CONTENT AREA(S): elementary--math, science, history, and geography taught in French and English or Spanish and English (alternates half-day English, half-day foreign language)
secondary--history, geography

CURRICULUM: school-developed curriculum

MATERIALS: teacher-developed and adapted materials; materials from other countries, e.g., Spanish books from Argentina and Puerto Rico

COMMENTS: High school students prepare for the International Baccalaureate diploma. Language classes are divided into "intensive" (for students who don't speak the language at home) and "regular" (for students who do have the language spoken in the home). Secondary students also take an additional foreign language which is taught in the traditional manner (not immersion).

CONTACT PERSONS:

Doris Hartenberger (elementary)
Washington International School
2735 Olive Street, N.W.
Washington, DC 20007
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Washington, DC 20008
(202) 364-1800

APPENDIX B. CONTENT-BASED LANGUAGE INSTRUCTION: SELECTED RESOURCES AND MATERIALS

ESL/BILINGUAL CONTENT MATERIALS

CURRICULUM GUIDES

BIOLOGY: A HIGH SCHOOL COURSE FOR ESL STUDENTS. (n.d.). Fairfax County Public Schools. Lacey Instructional Center, 3705 Crest Drive, Annandale, VA 22003.

CAREER DEVELOPMENT FOR INDOCHINESE: A CURRICULUM GUIDE. 1982. L. Phillips-Jones, ed. Santa Clara, CA: Office of Education. Intermediate-advanced LEP secondary. Multilingual VESL guide designed for Laotian, Cambodian and Vietnamese students. Contains instructor guidelines, support material and student materials in Lao, Cambodian and Vietnamese. English version of all material.

CIVICS FOR ESOL STUDENTS, GRADE 9. (#7690-1701). 1983. Prince George's County Public Schools. ESOL Office, 6366 Greenbelt Road Greenbelt, MD 20770.

COMPUTER ASSISTED INSTRUCTION (CAI) IN U.S. HISTORY. 1983-1986. (E.S.E.A. Title VII Program of Academic Excellence). Nga Duong, Project Director. Seattle Public Schools, Transitional Bilingual Education CAI/Program, 815 Fourth Avenue, Seattle, WA 98109. Focus of project is use of CAI to increase achievement of LEP students in U.S. History. Target population is Cambodian, Lao, and Vietnamese students who receive bilingual instruction in Computer Center. Includes computer literacy curriculum, U.S. History 11A and 11B supplementary CAI course and software.

DRIVER EDUCATION INFORMATION FOR LEP STUDENTS. 1984. A. Esaki & M.C. Lykke, Coordinators. Senn Metropolitan Academy, 5900 North Glenwood Avenue, Chicago, IL 60660. Teacher's Guide available.

EIGHTH GRADE PHYSICAL SCIENCE. 1985. Arlington County Public Schools. ESOL Office, 1426 N. Quincy St. Arlington, VA 22207. (Text and lab manual: Focus on Physical Science). Includes activities for measurement, forces, matter, waves, heat, electricity and magnetism.

KNOW YOURSELF: A HEALTH EDUCATION MATERIAL FOR FRESHMAN YEAR PHYSICAL EDUCATION. 1985. A. Esaki & M.C. Lykke, Coordinators. Senn Metropolitan Academy, 5900 N. Glenwood Ave., Chicago, IL 60660. Covers broad health subjects of grooming and sexuality.

LEARNING PACKETS IN U.S. HISTORY FOR ESOL STUDENTS, GRADE 8. (#7690-1702). 1983. Prince George's County Public Schools. ESOL Office, 6366 Greenbelt Road, Greenbelt, MD 20770.

POST SECONDARY OPPORTUNITIES FOR HILT EXTENSION STUDENTS. 1982. Margaret Taylor, Coordinator. Arlington County Public Schools. ESOL Office, 1426 N. Quincy St. Arlington, VA 22207. Career education for LEP students. Includes worksheets, vocabulary lists, interest survey, and audio-visual resource list.

PROJECT BICOMP - BILINGUAL INTEGRATED CURRICULUM PROJECT. 1983-86. (E.S.E.A. Title VII Program of Academic Excellence). C. Coughran and B. Merino, Coordinators. Washington Unified School District, 930 West Acres Road, West Sacramento, CA 95691. The Bilingual Instructional Computer Project (BICOMP) consists of four 10-16 week science core instructional modules designed to increase English language skills of LEP students grades 3-6. Themes of weather, plants, and environment are reinforced through a series of computer assisted science lessons (implemented twice a week) and spin-off lessons in art, literature and math.

TEACHING ENGLISH AS A SECOND LANGUAGE: GRADES 3-8. 1985. Nilda Soto Ruiz, Director. New York City Board of Education. Office of Bilingual Education, 131 Livingston St., Brooklyn, NY 11201. A curriculum guide with instructional strategies, and lesson plans in ESL math, science, and social studies.

UNITED STATES AND VIRGINIA GOVERNMENT FOR ESL STUDENTS. 1982. E. Eisenhower, Coordinator. Fairfax County Public Schools. Lacey Instructional Center, 3705 Crest Drive, Annandale, VA 22003. For intermediate (B1) or advanced (B2) ESL students. Teacher's Manual includes objectives, year's outline, ten units of teaching and learning activities, references to texts and supplemental materials. (Basic text for course: Ball & Rosch, Civics, 5th edition, Chicago: Follett, 1978). Resource Handbook contains worksheets, maps, and articles for students and teachers.

U.S.- VIRGINIA HISTORY: A BILINGUAL CURRICULUM GUIDE, GRADES 10-12. 1979. Bilingual Education Office, Arlington County Public Schools, 1426 N. Quincy Street, Arlington, VA 22207. Course taught in English with native language support in Spanish and Vietnamese. Curriculum guide has 18 units and list of materials. (Basic text: Eibling et.al., Two Centuries of Progress: U.S. History, 2nd edition, River Forest: Laidlaw Brothers 1977; supplementary texts: (Spanish) Whitney, Síntesis de la Historia de los Estados Unidos, Mexico City: Editorial Limusa-Wiley, 1966; (Vietnemese) Duong, Lich-su Hoa-ky Gian-yeu, Berkeley, 1978.

VOCATIONALLY-ORIENTED BILINGUAL CURRICULUM. (Forthcoming, 1986). Trinity-Arlington Parent and Teacher Training Project. Dr. C. Simich-Dudgeon, Project Director, Trinity College, Washington, DC 20017. For use with LEP high school students, the curriculum focuses on English skills related to career/vocational education. The VOBC will be available in bilingual editions of English/Khmer, Lao, Spanish, and Vietnamese. Supplementary materials include a Teacher's Guide and two training videotapes.

SUPPLEMENTARY ESL MATERIALS

A COGNITIVE ACADEMIC LANGUAGE LEARNING APPROACH: AN ESL CONTENT-BASED CURRICULUM. 1986. A.U. Chamot & J.M. O'Malley. Inter America Research Associates, Inc. Rosslyn, VA: National Clearinghouse for Bilingual Education.

ANNOTATED BIBLIOGRAPHY OF BILINGUAL/ESL TUTORIAL RESOURCE MATERIALS. 1985. Project "TEACH". Sheboygan Area School District. Department of Instructional

Services, 830 Virginia Ave., Sheboygan, WI 52081. List of ESL/Hmong materials in biology, math, health and science.

BILINGUAL EDUCATION TEACHER TRAINING PACKETS. SERIES C: CONTENT METHODS AND MATERIALS FOR TEACHING SCIENCE, MATHEMATICS, AND SOCIAL STUDIES IN THE BILINGUAL CLASSROOM. 1982. S.L. Santos. Dallas, TX: Dallas Independent School District. (Formerly by Dallas Evaluation, Dissemination & Assessment Center).

ENGLISH LANGUAGE SKILLS FOR BASIC ALGEBRA. (Forthcoming). Center for Applied Linguistics, FIPSE ESL/Math Project Staff, 1118 22nd St. N.W., Washington, DC 20037. For ESL and native English-speaking students having difficulty with the language of mathematics. A series of 5 self-instructional units to supplement basic algebra instruction: numerical and algebraic expressions; equations and inequalities, the language of word problems, definitions and theorems; and a glossary for basic algebra.

ILLUSTRATED BASIC MATH VOCABULARY. (n.d.). Project "TEACH." Sheboygan Area School District. Department of Instructional Services, 830 Virginia Avenue, Sheboygan, WI 53081. Designed to assist middle school and high school LEP students in developing a working vocabulary in math.

ORIENTAL ART PROJECT. 1985. ESL Office, Fairfax County Public Schools, 3705 Crest Drive, Annandale, VA 22003. Mimeographed lessons for language majority and language minority students in grades 5 and 6. Topics include themes, techniques and materials used by Oriental artists. A literary unit which explores the relationship between art, poetry, and symbols developed by ESL staff and a video cassette featuring modern Korea supplement the week-long activities.

TEACHING ABSTRACT CONCEPTS USING SITUATIONAL LANGUAGE TEACHING. (n.d.). Division of Instruction-ITV, Washington County Board of Education, 823 Commonwealth Ave., Hagerstown, MD 21740. Videotapes show how Situational Language Teaching can be used to teach abstract concepts in content material from history, literature, biology, etc. Demonstrates how material from content areas can be adapted to teach students with limited English proficiency. For additional information about project or use of tapes write: Dr. Thomas Kincaid, ESOL/Bilingual Education Center, Box 730, Hagerstown, MD. 21740.

ESL CONTENT TEXTBOOKS

CONTENT AREA ESL: SOCIAL STUDIES. (1986). by Dennis Terdy. Palatine, IL: Linmore Publishing. Prepares intermediate ESL students at the secondary level with necessary language skills to effectively transition into regular social studies and other content materials. Also appropriate for history and government. Develops content area reading strategies and writing skills.

ENGLISH ACROSS THE CURRICULUM: PREPARING FOR OTHER SUBJECTS IN ENGLISH. (n.d.). by M. Maggs and D. Krulik. Lincolnwood, IL: National Textbook Company. Three workbooks in the series develop basic vocabulary in social studies, science, math, and English as well as basic study/reading skills needed in all academic areas.

HEALTH SCIENCE: ESL ACTIVITIES. 1985. by C. Kessler & A. Fathman. Lexington, MA: D.C. Heath & Co. A series of workbooks, levels 1-6, to accompany the texts Health Science, books 1-6. Provides additional practice for ESL students using the texts.

LANGUAGE DEVELOPMENT THROUGH CONTENT--SOCIAL STUDIES. AMERICA: THE EARLY YEARS and AMERICA: AFTER INDEPENDENCE. 1986. by A. Chamot. Reading, MA: Addison-Wesley Publishing Company. Supplementary/Middle grades-secondary. Content-based workbooks. Focus on developing graphic skills. Activities include independent work, peer tutoring, and group work.

SCIENCE AND TECHNOLOGY: A READER. 1983. by E. Lander. Rowley, MA: Newbury House. High interest text for advanced LEP high school students. Contains 30 science news articles reprinted from The New York Times. Emphasis on context reading and work analysis. Effective for developing or refining science reading skills.

SCIENCE FOR LANGUAGE LEARNERS. (In press). by A.K. Fathman & M.E. Quinn. Oxford: Pergamon Press.

SKILL SHARPENERS FOR ESL STUDENTS. 1984. by J. DeFilippo, C. Skidmore & M. Walker. Reading, MA: Addison-Wesley Publishing Company. Supplementary/7-12. Levels 1-4. To bridge the gap between ESL and the content areas: social studies, math, history, and science. Teaches classroom and life survival skills.

FOREIGN LANGUAGE/BILINGUAL CONTENT MATERIALS

CHINESE and PILIPINO

AMERICAN HISTORY IN CHINESE. (n.d.). (Grades 7-9). National Dissemination Center (NDC), (formerly EDAC-Lesley College). 417 Rock Street, Fall River, MA 02720. Text introduces Chinese bilingual students to U.S. history from settlements to 1970's.

BILINGUAL SCIENCE: AN INTEGRATED APPROACH FOR BILINGUAL CHINESE AND FILIPINO JUNIOR HIGH SCHOOL STUDENTS. 1982. Los Angeles, CA: EDAC-LA. Available in Chinese, Pilipino, and bilingual editions. Has teacher's resource manual, modules with game cards, game boards, worksheets, student activity guides and charts. Materials adopt an experiential approach to science that emphasizes the process of inquiry. Incorporates English learning.

CHINESE CULTURAL RESOURCE BOOK. (n.d.). (Grades K-6) Text by I. Kwok. Fall River, MA: National Dissemination Center. For elementary teachers of Chinese bilingual programs. Supplements the social science curriculum with stories, songs, and games.

CHINESE SOCIAL STUDIES. 1980. Introductory level (K); Level 1 (grades 1-2); Level 2 (grades 3-4). Published by: Evaluation, Dissemination and Assessment Center (EDAC-LA), California State University, L.A., 5151 State University Drive, Los Angeles, CA 90032. Bilingual texts, teacher's guides and resource

books. Level 3 (pilot test edition) available from: ARC Associates, Inc. 310 Eighth St., #311, Oakland, CA 94607. (English/Pilipino also).

MATHEMATICS. 1983. Volume I (grade 7); Volume II (grade 8). Text by J. Woo. Fall River, MA: National Dissemination Center. Texts written on Chinese language level appropriate for grade levels. Features achievements of Chinese scholars in mathematics field.

FRENCH

FRENCH IMMERSION PROGRAM: CURRICULUM PRODUCTS. Annotated price list/order form. Milwaukee Public Schools. French Immersion Program, Eighty-eighth Street School, 3575 N. 88th Street, Milwaukee, WI 53228. Available list of French materials used at MPS Multi-Language School at each grade level to teach reading, language arts, math, science and social studies.

L'ÉTUDE DES CARTES I & II. (n.d.). Adapted and translated by Baranowski et al. Milwaukee Public Schools. Based on Map Skills, Scholastic Magazine, J. Sholinsky, 1974.

LE CENTRE FRANCO-ONTARIEN DE RESSOURCES PÉDAGOGIQUES: CATALOGUE MATERNELLE À LA 8e ANNÉE. (n.d.). 339 rue Wilbrand, Ottawa, Ontario, K1N6M4, Canada.

LA MATHÉMATIQUE À L'ÉLÉMENTAIRE. 1976. (Grades K-6) by R. Eicholz et al. Reading, MA: Addison-Wesley Publishing Company.

LES CHEMINS DE LA SCIENCE. 1978. (Grades K-6). by V. Rockcastle et al. Reading, MA: Addison-Wesley Publishing Company.

RECUEIL DE DOCUMENTS PÉDAGOGIQUES PRÉPARÉS POUR LES CLASSES D'IMMERSION FRANÇAISE. 1982. Association Canadienne des Professeurs d'Immersion. Bureau de poste Alta Vista, C.P. 8843, Ottawa, Ontario, K1G3H8, Canada.

ZONES CLIMATIQUES DU MONDE. (n.d.). Adapted and translated for Multi-Language School, Milwaukee Public Schools. Based on Regions of the World, McGraw Hill, 1978.

HMONG

BIOLOGY OF MAN. (n.d.). Project "TEACH." Sheboygan Area School District. Department of Instructional Services, 830 Virginia Avenue, Sheboygan, WI 53081. A White Hmong translation of selected passages from The Biology of Man, by P. Kelly, Quercus Publishers, 1981. Designed to assist Hmong-literate teachers and aides in presenting basic information related to human biology.

ENGLISH/WHITE HMONG HUMAN SEXUALITY GLOSSARY. (n.d.). Sheboygan, WI: Sheboygan Area School District. Designed to assist LEP students in their high school science and health classes. Care taken to use Hmong terms acceptable to Hmong community.

MATHEMATICS?/LEJ? (n.d.). Sheboygan, WI: Sheboygan Area School District. Consists of 12 English/White Hmong cassettes with accompanying illustrated material. Designed to assist intermediate LEP middle school and high school White Hmong speakers in conceptual development in mathematics.

UNDERSTANDING MATTER. (n.d.). Sheboygan, WI: Sheboygan Area School District. White Hmong edition designed to assist Hmong-literate teachers and aides in the explanation of the scientific nature of matter. A direct translation of Understanding Matter: Chemistry Workshop 1, by S. Rosen, Globe Publishers, 1983.

KOREAN

AMERICAN GOVERNMENT: VOLUMES I & II. 1983. (Grades 7-9). Fall River, MA: National Dissemination Center. Volumes provide a comparative study of American government by using similarities and differences of American and Korean governments.

AMERICAN HISTORY: VOLUMES I & II. (n.d.). (Grades 7-9). Fall River MA: National Dissemination Center. Special features include bilingual vocabulary lists.

WORLD HISTORY: VOLUMES I & II. 1982. Fall River, MA: National Dissemination Center. Cultures and histories of East and West are compared and contrasted.

PORTUGUESE

CONHECE-TE A TI PRÓPRIO. (n.d.). (Grades 7-9). Text by M.M. Andrade Lopes. Fall River, MA: National Dissemination Center. A career education method which also can be used as an instructional instrument in both reading and social studies.

CIÊNCIAS 1, 2, & 3. 1983. (Grades 1-3). Texts by L. Rapso. Fall River, MA: National Dissemination Center. Introduces Portuguese bilingual student to natural sciences, health and nutrition. Texts, teacher's guides and student workbooks.

ESTUDOS SOCIAIS K, 1, 2, 3. (n.d.). (Grades K-3). Texts by S. Ferro. Fall River, MA: National Dissemination Center. For Portuguese bilingual students. Teacher's guide and texts.

GENTE NO TRABALHO. (n.d.). (Grades K-4). Text by M.J. D'Alu et al. A multi-media package which describes professions. Teacher's guides, student's exercise book, transparencies, cassette tapes and filmstrips are included for each grade level.

MATEMÁTICA 1, 2, & 3. (n.d.). (Grades 1-3). Texts by M.J. D'Alu. Fall River, MA: National Dissemination Center. Teste de Matematica II with teacher's guide and student books available.

QUE QUERES SER? (n.d.). (Grades 5-8). Text by M.M. Andrade Lopes. Fall River, Ma: National Dissemination Center. Using information contained in 1978-79

Occupational Outlook Handbook, the text introduces student to different professions.

SPANISH

AN EXEMPLARY APPROACH TO BILINGUAL EDUCATION: A COMPREHENSIVE HANDBOOK FOR IMPLEMENTING AN ELEMENTARY-LEVEL SPANISH-ENGLISH IMMERSION PROGRAM. 1982. (E.S.E.A. Title VII Bilingual Demonstration Project). San Diego Unified School District. Materials Development, Curriculum and Programs Division, Room 2002, 4100 Normal St., San Diego, CA 92103. Lists specific basic and supplementary materials used for each subject at levels PK-6. Includes references of materials developed for the program.

CIENCIAS. 1985. (Grados K-6). Spanish translation of Silver Burdett Science. Morristown, NJ: Silver Burdett.

ÉNFASIS EN LA CIENCIA. 1985. (Niveles K-6). Charles E. Merrill Publishing Company.

ISCS: INTERMEDIATE SCIENCE CURRICULUM STUDY. (Grades 7-10). 1982. Published by Evaluation, Dissemination and Assessment Center (EDAC-LA), California State University, L.A., 5151 State University Drive, Los Angeles, CA 90032. Spanish counterpart of English ISCS series Probing the Natural World (available through Silver-Burdett Pub. Co.). Levels I, II, and III.

MATEMÁTICAS. 1983. (Niveles K-8). Adapted and translated from Mathematics for Mastery by Dr. F. Garriga. Morristown, NJ: Silver Burdett.

MULTIDISCIPLINARY APPROACH TO SPANISH: RESOURCE BOOK. 1985. J. Johnson, Coordinator. Maple Dale-Indian Hill Schools, 8377 N. Port Washington Rd., Milwaukee, WI 53217-2693. An elementary school integrated Spanish curriculum including art, music, math, science, and language arts.

PASOS HACIA LA HUMANIDAD. (n.d.). Level I (grades 4-8); Level II (grades 8-12). The National Hispanic University, 255 E. 14th St., Oakland, CA 94606. Bilingual editions contain brief biographies of well-known persons to focus on theme of people working together. Includes suggested activities in social studies.

SPANISH IMMERSION PROGRAM: CURRICULUM PRODUCTS. Annotated price list/order form. Milwaukee Public Schools. Fifty-fifth Street School, Spanish Immersion Program, 2765 S. 55th St., Milwaukee, WI 53219. Available list of Spanish materials used at MPS Multi-Language School at each grade level to teach reading, language arts, math, science, and social studies.

SPANISH LANGUAGE ARTS/READING CURRICULUM. (Grades PK-6). (n.d.). E. Aldo, Coordinator. Oyster Bilingual Elementary School, 29th & Calvert Streets, N.W., Washington, DC 20008. Spanish translation of official Competency-Based Curricula of District of Columbia Public Schools.

SSIA: SOCIAL STUDIES - AN INQUIRY APPROACH. (Grades 9-12). 1982. Los Angeles, CA: EDAC-LA. Bilingual modules include: personality, economic organization, and environment. Teacher texts and tests.

UNIDAD DE TRABAJO. (n.d). The National Hispanic University, 255 E. 14th St., Oakland, CA 94606. Bilingual Resource Units provide information about the metric system of measurement.

WET AND WILD: A SIX-UNIT MARINE EDUCATION TEACHER GUIDE. (K-6). (n.d.). Dev. by University of Southern California, Institute for Marine and Coastal Studies' Sea Grant Program. Los Angeles, CA: EDAC-LA. Bilingual guides are multi-disciplinary. Lesson plans and activities designed for classes in most content areas.

VIETNAMESE

ENGLISH-VIETNAMESE SCIENTIFIC TERMINOLOGY FOR HIGH SCHOOL AND JUNIOR COLLEGE STUDENTS. (n.d.). The National Hispanic University, 255 E. 14th St., Oakland, CA 94606. Seven bilingual vocabulary books include math, physics, geography, chemistry, natural sciences, government and history, and mathematics II.

SOCIAL STUDIES UNIT. (n.d.). Oakland, CA: The National Hispanic University. Developed for refugee children 8-10 years old. Designed to teach Vietnamese and their American classmates about Vietnam. Describes English measurement system and American signs.

PHAN VIET NGU THAM KHAO: WORLD HISTORY STUDY MATERIALS FOR SECONDARY SCHOOL STUDENTS. 1980. by N.N. Bich et al. Arlington, VA: Arlington County Public Schools. Vietnamese edition.

MISCELLANEOUS

CURRICULUM GUIDE FOR THE CINCINNATI PUBLIC SCHOOLS ACADEMY OF WORLD LANGUAGES: ARABIC, CHINESE, JAPANESE, AND RUSSIAN. 1985. Cincinnati Public Schools, 230 East 9th Street, Cincinnati, OH 45202. Volume I includes rationale, goals, implementation and evaluation. Volume II gives contents of curriculum for Level 1. Each unit includes activities in art, music, and physical education. Volumes for other levels forthcoming. (In English).

A JAPANESE LANGUAGE AND CULTURE UNIT. 1986. Prince George's County Public Schools. Upper Marlboro, MD 20772. An ICAL (International Culture and Language) unit for the TAG Magnet Program (grades 2-6).

GERMAN IMMERSION PROGRAM: CURRICULUM PRODUCTS. Annotated price list/order form. Milwaukee Public Schools. German Immersion Program, Eighty-second Street School, 2778 N. 82nd Street, Milwaukee, WI 53222. Available list of German materials used at MPS Multi-Language School at each grade level to teach reading, language arts, math, science, and social studies.

ABOUT THE AUTHOR

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